ADDITIONAL

Service Manual

PIONEER
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ORDER NO.
ARP1383

STEREO DOUBLE CASSETTE TAPE DECK AMPLIFIER

DC-888Z

HE, SD

- **For servicing these types, please refer to the DC-X88Z service manual (ARP1303) with the exception of this additional service manual.**
- This additional service manual is applicable to the HE and SD types.

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	56×10^1	561	RD1/4PS $\boxed{5}\,\boxed{6}\,\boxed{1}$ J
47kΩ	47×10^3	473	RD1/4PS $\boxed{4}\,\boxed{7}\,\boxed{3}$ J
0.5Ω		0R5	RN2H $\boxed{0}\,\boxed{R}\,\boxed{5}$ K
1Ω		010	RS1P $\boxed{0}\,\boxed{1}\,\boxed{0}$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	562×10^1	5621	RN1/4SR $\boxed{5}\,\boxed{6}\,\boxed{2}\,\boxed{1}$ F

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[illegible] APR [illegible] Printed in Japan

DC-888Z/HE,SD

The DC-888Z/HE, SD types are the same as the DC-X88Z/HB type with the exception of the following sections.

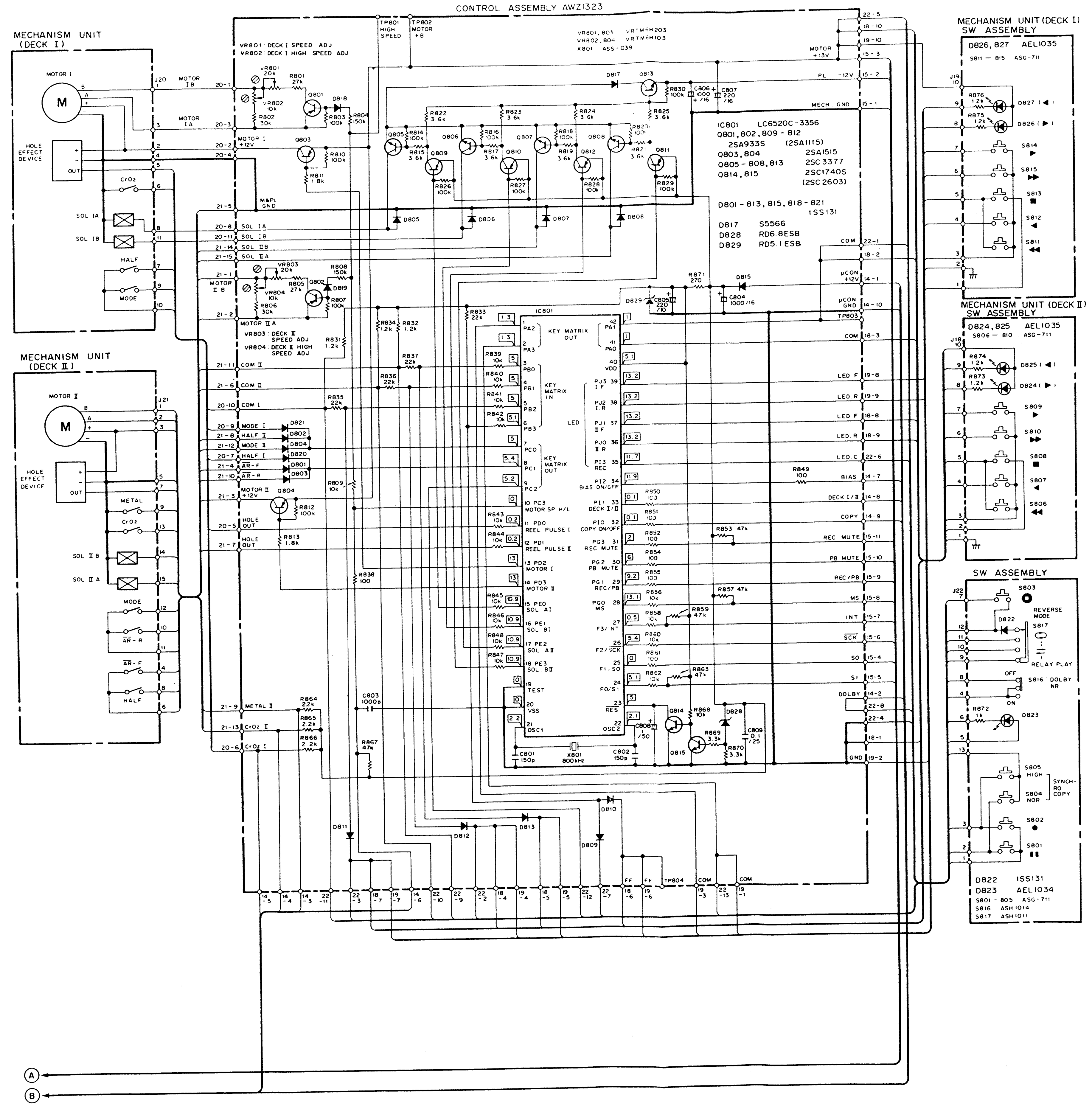
Mark	Symbol & Description	Parts No.			Remarks
		DC-X88Z HB type	DC-888Z		
			HE type	SD type	
	Main assembly	AWZ1312	AWZ1312	AWZ1313	
⚠ ★	T1 Power transformer				
	(220V/240V)	ATS1060	ATS1060	.....	
	(110V/120V-127V/220V/240V)	.....	.....	ATS1063 (ATS1061)	
⚠	AC Socket (AC OUTLET)	AKP-509	AKP-508	AKP-507	
⚠ ★★	S1 Line voltage selector (110V/120V-127V/220V/240V)	.....	.....	AKX-507	
⚠ ★★	FU1, 2 Fuse (T1.25A)	AEK-509	AEK-018	.....	
⚠ ★★	FU1, 2 Fuse (1.25A)	.....	.....	AEK-120	
⚠ ★★	FU3, 4 Fuse (T1.6A)	AEK-510	AEK-405	.....	
⚠ ★★	FU3, 4 Fuse (2A)	.....	.....	AEK-122	
⚠ ★★	FU5, 6 Fuse (T2.5A)	AEK-512	AEK-403	.....	
⚠ ★★	FU5, 6 Fuse (4A)	.....	.....	AEK-125	
⚠	AC Power cord	ADG-051	ADG-041	ADG1016	
	Knob (SURROUND)	.....	.....	AAD1114	
	Door panel (DECK I)	AAK1179	AAK1229	AAK1229	
	Door panel (DECK II)	AAK1178	AAK1228	AAK1228	
	Screw	ABA1003	.....	.....	
	Logic assembly*	Non supply	.....	.....	
	Amplifier panel	AAK1182	AAK1230	AAK1302	
	Front panel assmebly	AMB1143	AMB1175	AMB1175	
	Bonnet	ANE1002	ANE1029	ANE1029	
	Screw	.....	CBZ30P080FZK	CBZ30P080FZK	
	Side pad L	AHA1062	AHA1049	AHA1049	
	Side pad R	AHA1063	AHA1050	AHA1050	
	Packing case	AHD1168	AHD1202	AHD1202	
	Player stand L	AMR1060	.....	.....	
	Player stand R	AMR1061	.....	.....	
	Operating instructions				
	(English)	ARB1048	.....	ARB1072	
	(English/German/Italian/French)	.....	ARE1041	.....	
	(Spanish)	.....	.....	ARC1054	

* Logic assembly for DC-X88Z/HB would be eliminated in future.
In that case, IC801 on the control assembly is to be modified from LC6520C-3311 to LC6520C-3356.

MAIN ASSEMBLY (AWZ1313)

The main assembly (AWZ1313) is the same as the main assembly (AWZ1312) with the exception of the following sections.

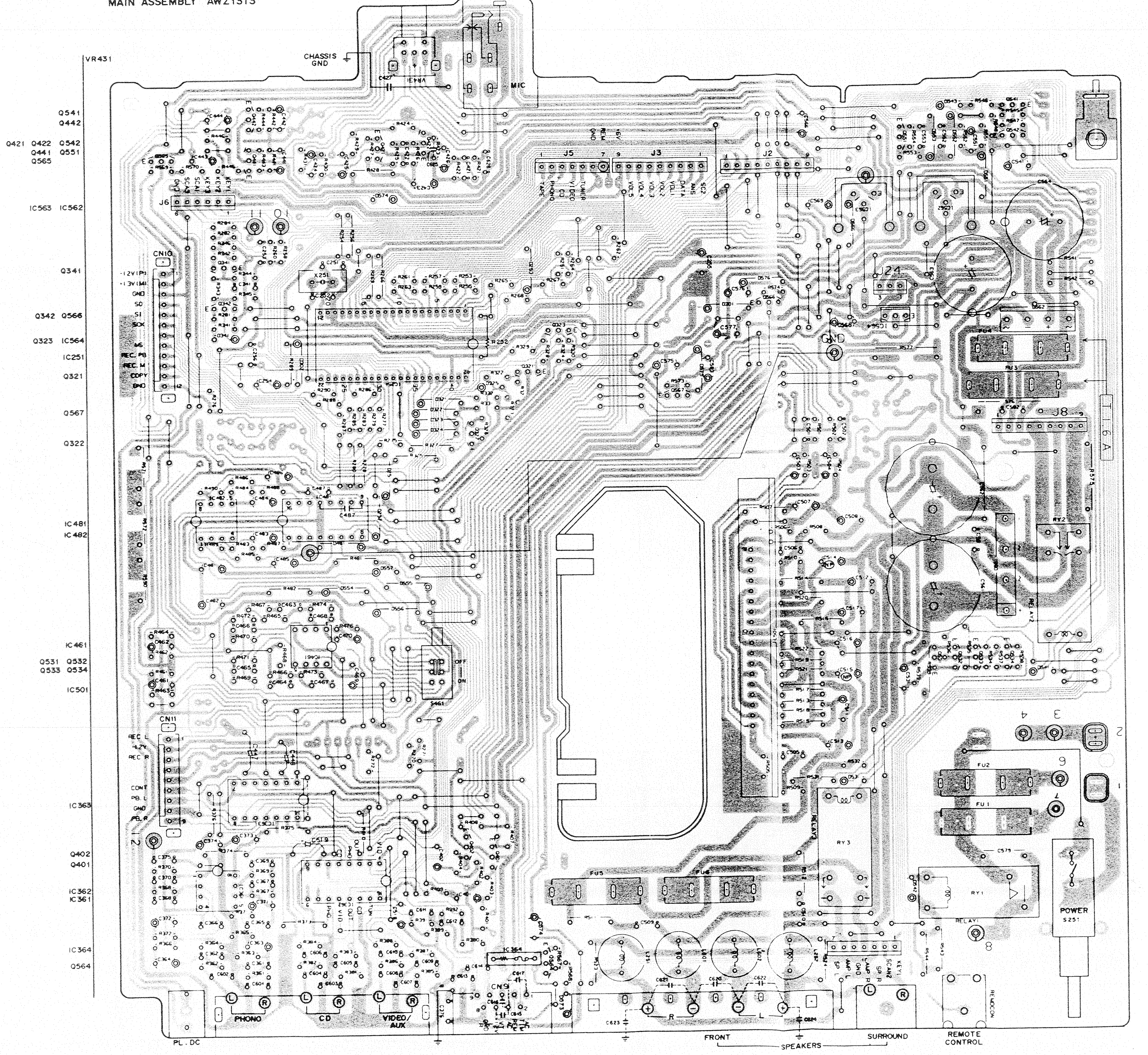
Mark	Symbol & Description	Parts No.			Remarks
		AWZ1312 HB type	AWZ1312 HE type	AWZ1313 SD type	
★★	IC461 (OP-AMP IC)	.....	.....	M5218P	
	R461–R464	.....	.....	RD1/8PM104J	
	R465, R466	.....	.....	RD1/8PM683J	
	R467, R468	.....	.....	RD1/8PM473J	
	R469, R470	.....	.....	RD1/8PM823J	
	R471–R474	.....	.....	RD1/8PM333J	
	R475, R476	.....	.....	RD1/8PM104J	
	C461, C462	.....	.....	CEAS010M50	
	C463, C464	.....	.....	CKCYB681K50	
	C465, C466	.....	.....	CKCYB332K50	
	C467, C468	.....	.....	CCCSL121J50	
	C469, C470	.....	.....	CEAS2R2M50	
	Terminal (2P)	.....	.....	AKB-093	
⚠ ★★	S461 Push switch (STEREO WIDE)	.....	.....	ASG-424	


CONTROL ASSEMBLY AWZ1323
MECHANISM UNIT (DECK I)
MOTOR I
M
HOLE EFFECT DEVICE
OUT
CrO2
SOL IA
SOL IB
HALF
MODE
J20
MOTOR IB
MOTOR IA
MECHANISM UNIT (DECK II)
MOTOR II
METAL
SOL II B
SOL II A
AR-R
AR-F
J21
TP801 HIGH SPEED
TP802 MOTOR +B
VR801: DECK I SPEED ADJ
VR802: DECK I HIGH SPEED ADJ
VR803: DECK II SPEED ADJ
VR804: DECK II HIGH SPEED ADJ
VR801 20k
VR802 10k
VR803 20k
VR804 10k
R801 27k
R802 30k
R803 100k
R804 150k
R805 27k
R806 30k
R807 100k
R808 150k
R810 100k
R811 1.8k
R812 100k
R813 1.8k
Q801
Q802
Q803
Q804
D818
D819
MOTOR I +12V
MOTOR II +12V
MOTOR II A
MOTOR II B
M&PL GND
20-1
20-3
20-2
20-4
21-5
20-8 SOL IA
20-11 SOL IB
21-14 SOL IIB
21-15 SOL IIA
21-1
21-2
21-11 COM II
21-6 COM II
20-10 COM I
20-9 MODE I
21-8 HALF II
21-12 MODE II
20-7 HALF I
21-4 AR-F
21-10 AR-R
21-3
20-5 HOLE OUT
21-7 HOLE OUT
21-9 METAL II
21-13 CrO2 II
20-6 CrO2 I
D821
D802
D804
D820
D801
D803
R831 1.2k
R832 1.2k
R834 1.2k
R835 22k
R836 22k
R837 22k
R809 10k
R838 100
R833 22k
R864 2.2k
R865 2.2k
R866 2.2k
R867 47k
C803 1000p
VR801, 803 VRTM6H203
VR802, 804 VRTM6H103
X801 ASS-039
D817
Q813
R830 100k
C806 1000/16
C807 220/16
MOTOR +13V
PL -12V
MECH GND
R822 3.6k
R823 3.6k
R824 3.6k
R825 3.6k
R814 100k
R815 3.6k
R816 100k
R817 3.6k
R818 100k
R819 3.6k
R820 100k
R821 3.6k
R826 100k
R827 100k
R828 100k
R829 100k
Q805
Q806
Q807
Q808
Q809
Q810
Q811
Q812
D805
D806
D807
D808
IC801 LC6520C-3356
Q801, 802, 809 - 812 2SA933S (2SA1115)
Q803, 804 2SA1515
Q805 - 808, 813 2SC3377
Q814, 815 2SC1740S (2SC2603)
D801 - 813, 815, 818 - 821 1SS131
D817 S5566
D828 RD6.8ESB
D829 RD5.1ESB
R871 270
D815
D829
C805 220/10
C804 1000/16
COM
μCON +12V
μCON GND
TP803
IC801
1 PA2
2 PA3
KEY MATRIX OUT
3 PB0
4 PB1
5 PB2
6 PB3
KEY MATRIX IN
7 PC0
8 PC1
9 PC2
KEY MATRIX OUT
10 PC3 MOTOR SP. H/L
11 PD0 REEL PULSE I
12 PD1 REEL PULSE II
13 PD2 MOTOR I
14 PD3 MOTOR II
15 PE0 SOL AI
16 PE1 SOL BI
17 PE2 SOL AII
18 PE3 SOL BII
19 TEST
20 VSS
21 OSC1
42 PA1
41 PA0
40 VDD
PJ3 39 I F
PJ2 38 I R
PJ1 37 II F
PJ0 36 II R
LED
PI3 35 REC
PI2 34 BIAS ON/OFF
PI1 33 DECK I/II
PI0 32 COPY ON/OFF
PG3 31 REC MUTE
PG2 30 PB MUTE
PG1 29 REC/PB
PG0 28 MS
27 F3/INT
26 F2/SCK
25 F1/SO
24 F0/SI
23 RES
22 OSC2
R839 10k
R840 10k
R841 10k
R842 10k
R843 10k
R844 10k
R845 10k
R846 10k
R847 10k
R848 10k
1.3
1.3
5
5
5
5.1
5
5.4
5.2
0
0.2
0.2
13
13
10.9
10.9
10.9
10.9
0
0
2.2
1
1
5.1
13.2
13.2
13.2
13.2
11.7
11.9
0.1
0.1
2
6
9.2
13.1
0.5
5.4
0
5.1
5
2.1
R849 100
R850 100
R851 100
R852 100
R853 47k
R854 100
R855 100
R856 10k
R857 47k
R858 10k
R859 47k
R860 10k
R861 100
R862 10k
R863 47k
Q814
Q815
R868 10k
R869 3.3k
R870 3.3k
D828
C808 1/50
C809 0.1/25
C801 150p
X801 800kHz
C802 150p
22-5
18-10
19-10
15-3
15-2
15-1
22-1
18-2
14-1
14-10
COM 18-3
LED F 19-8
LED R 19-9
LED F 18-8
LED R 18-9
LED C 22-6
BIAS 14-7
DECK I/II 14-8
COPY 14-9
REC MUTE 15-11
PB MUTE 15-10
REC/PB 15-9
MS 15-8
INT 15-7
SCK 15-6
SO 15-4
SI 15-5
DOLBY 14-2
22-8
22-4
18-1
GND 19-2
D810
D809
D811
D812
D813
FF
FF
TP804
COM
COM
14-5
14-4
14-3
22-11
22-3
18-7
19-7
14-6
22-10
22-9
22-2
18-4
19-4
18-5
19-5
22-12
22-7
18-6
19-6
19-3
22-13
19-1
MECHANISM UNIT (DECK I) SW ASSEMBLY
D826, 827 AEL1035
S811 — 815 ASG-711
J19
R876 1.2k
R875 1.2k
D827 (◀)
D826 (▶)
S814 ▶
S815 ▶▶
S813 ■
S812 ◀
S811 ◀◀
MECHANISM UNIT (DECK II) SW ASSEMBLY
D824, 825 AEL1035
S806 — 810 ASG-711
J18
R874 1.2k
R873 1.2k
D825 (◀)
D824 (▶)
S809 ▶
S810 ▶▶
S808 ■
S807 ◀
S806 ◀◀
SW ASSEMBLY
J22
S803
REVERSE MODE
D822
S817
RELAY PLAY
OFF
S816 DOLBY NR
ON
R872 1k
D823
S805 HIGH
S804 NOR
SYNCHRO COPY
S802 ●
S801 ▮▮
D822 1SS131
D823 AEL1034
S801 - 805 ASG-711
S816 ASH1014
S817 ASH1011
A
B

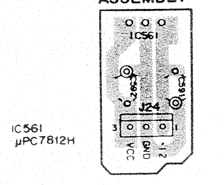
2. P.C. BOARD PATTERNS

- FOR SD TYPE

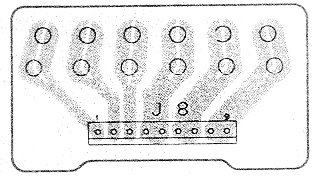
MAIN ASSEMBLY AWZ1313


VR431
Q541
Q442
Q421 Q422 Q542
Q441 Q551
Q565
IC563 IC562
Q341
Q342 Q566
Q323 IC564
IC251
Q321
Q567
Q322
IC481
IC482
IC461
Q531 Q532
Q533 Q534
IC501
IC363
Q402
Q401
IC362
IC361
IC364
Q564
CHASSIS GND
MIC
J5
J3
J2
J6
CN10
J24
J8
CN11
RY1
RY2
RY3
FU1
FU2
FU3
FU4
S461
POWER S251
RELAY
PHONO
CD
VIDEO/AUX
PL.DC
FRONT
SPEAKERS
SURROUND
REMOTE CONTROL

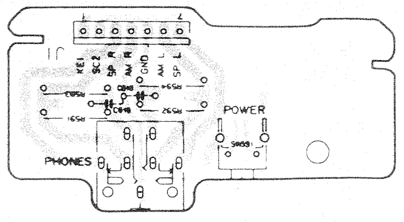
REGULATOR ASSEMBLY


IC561
μPC7812H
J24

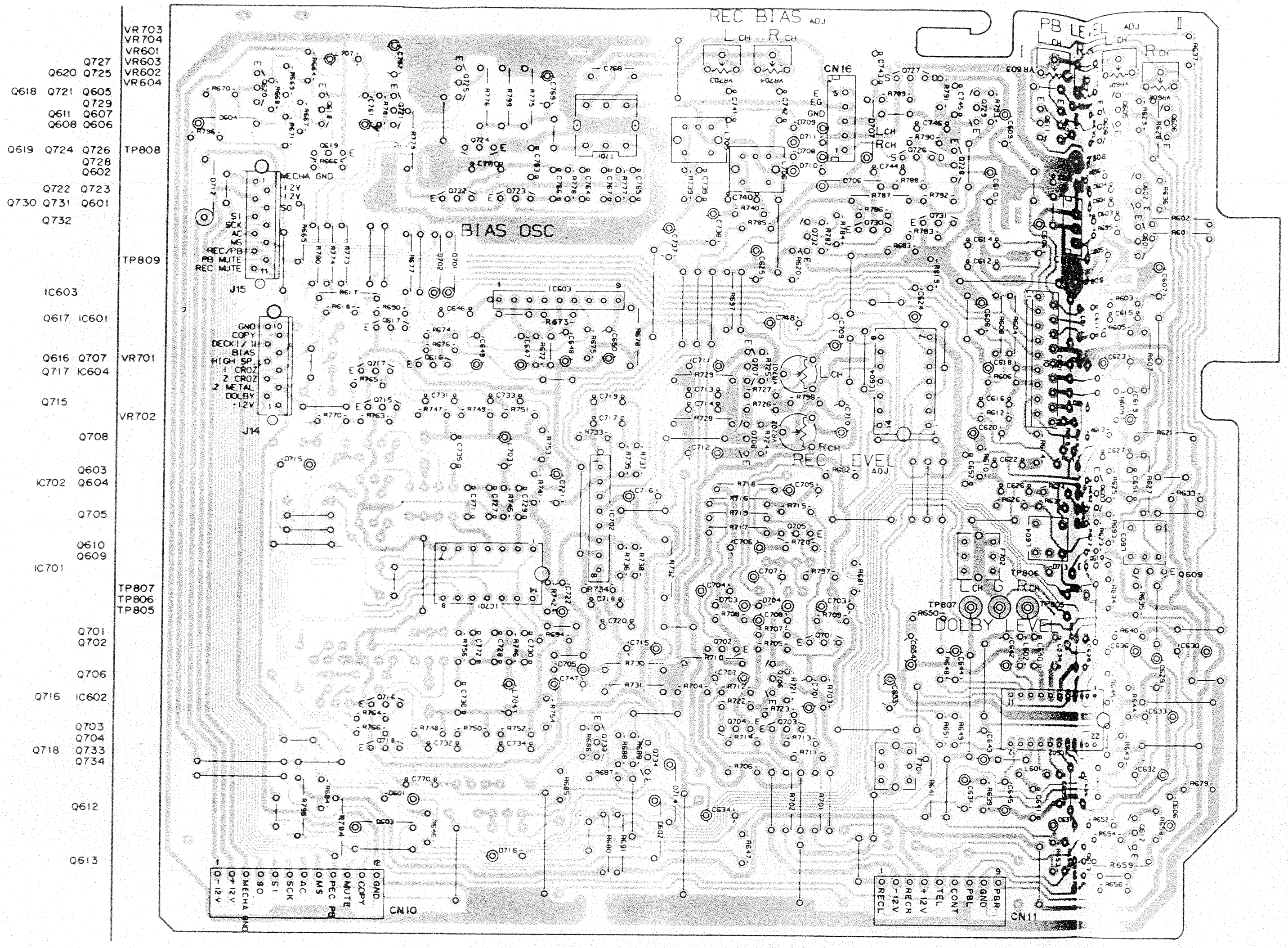
CONNECT ASSEMBLY



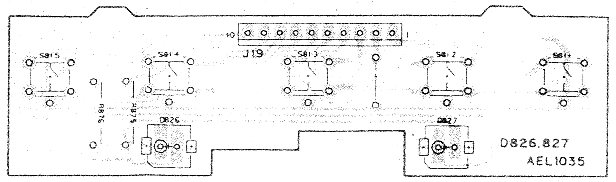
HEADPHONE ASSEMBLY


POWER
PHONES

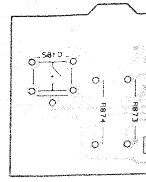
TAPE ASSEMBLY AWZ1321


VR703
VR704
VR601
VR603
VR602
VR604
Q727
Q620 Q725
Q618 Q721 Q605
Q729
Q611 Q607
Q608 Q606
Q619 Q724 Q726
Q728
Q602
Q722 Q723
Q730 Q731 Q601
Q732
TP808
TP809
IC603
Q617 IC601
Q616 Q707 VR701
Q717 IC604
Q715
VR702
Q708
Q603
IC702 Q604
Q705
Q610
Q609
IC701
TP807
TP806
TP805
Q701
Q702
Q706
Q716 IC602
Q703
Q704
Q718 Q733
Q734
Q612
Q613
REC BIAS ADJ
L CH R CH
PB LEVEL ADJ
BIAS OSC
REC LEVEL ADJ
DOLBY LEVEL
CN16
CN10
CN11
J14
J15
IC603
IC601
IC604

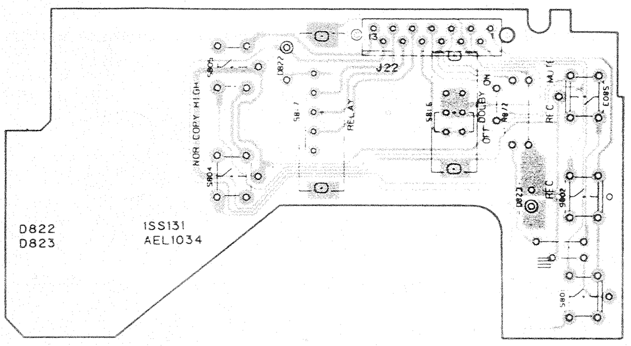
MECHANISM UNIT (DECK I)
SW ASSEMBLY


J19
D826
D827
D826,827
AEL1035

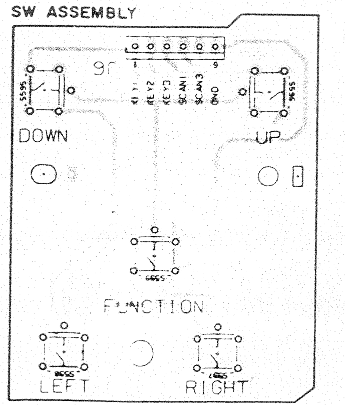
MECHANISM UNIT
SW ASSEMBLY



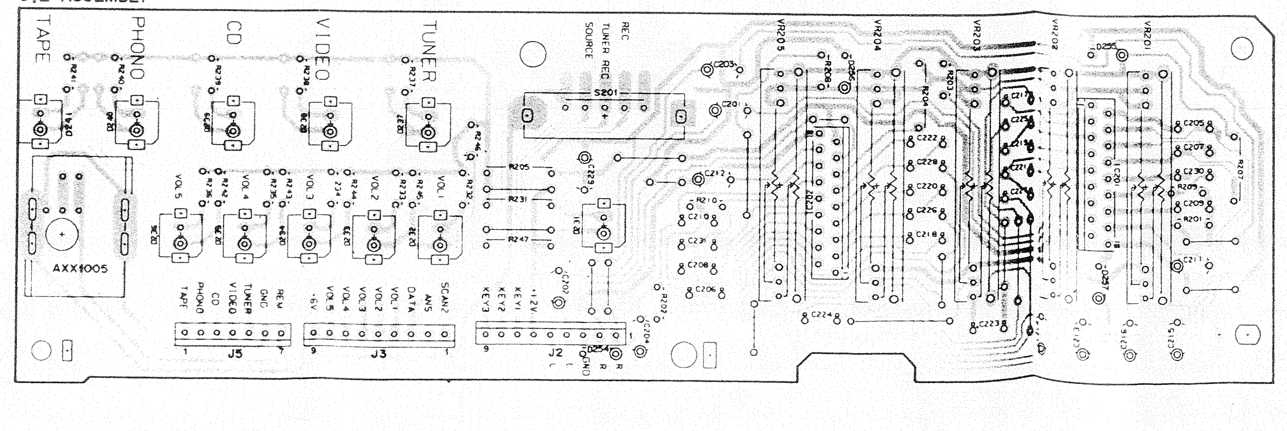
SW ASSEMBLY


J22
NOR COPY HIGH
RELAY
D822
D823
1SS131
AEL1034

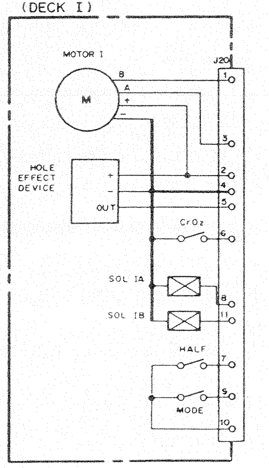
SW ASSEMBLY


DOWN
UP
FUNCTION
LEFT
RIGHT

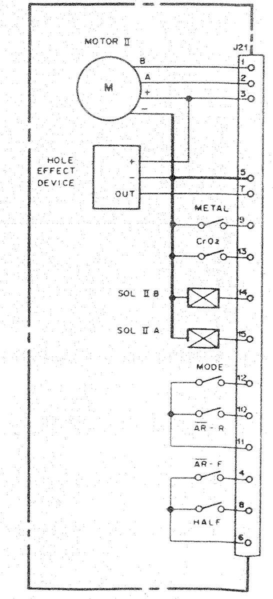
G.E ASSEMBLY


TAPE
PHONO
CD
VIDEO
TUNER
REC SOURCE
TUNER REC
S201
VR205
VR204
VR203
VR202
VR201
VOL 5
VOL 4
VOL 3
VOL 2
VOL 1
AXX1005
J5
J3
J2

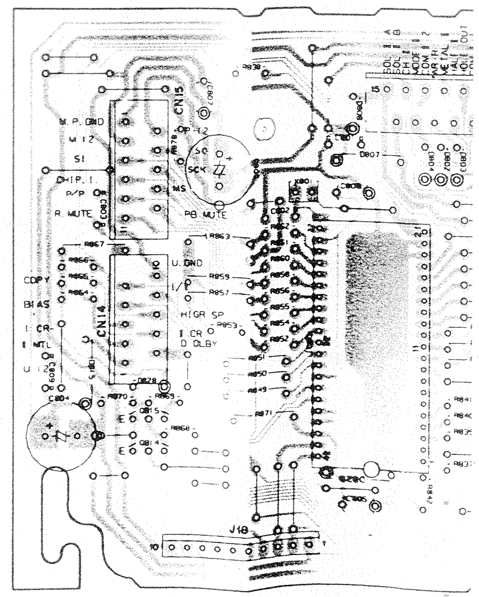
MECHANISM UNIT
(DECK I)


MOTOR I
M
J20
HOLE EFFECT DEVICE
OUT
CrO2
SOL IA
SOL IB
HALF
MODE

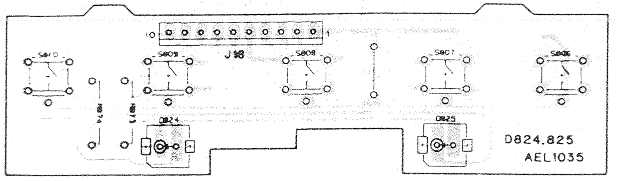
MECHANISM UNIT
(DECK II)


MOTOR II
M
J21
HOLE EFFECT DEVICE
OUT
METAL
CrO2
SOL IIB
SOL IIA
MODE
AR-R
AR-F
HALF

CONTROL ASSEMBLY AWZ1323

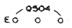
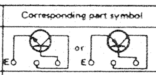
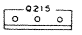
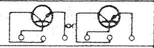
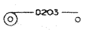
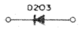
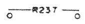

CN15
CN14
J18
M.P. GND
S1
R. MUTE
PB MUTE
COPY
BIAS
HIGH SP
CrO2
DOLBY

MECHANISM UNIT (DECK II)
SW ASSEMBLY


S810
S809
J18
S808
S807
S806
R874
R873
D824
D825
D824.825
AEL1035

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

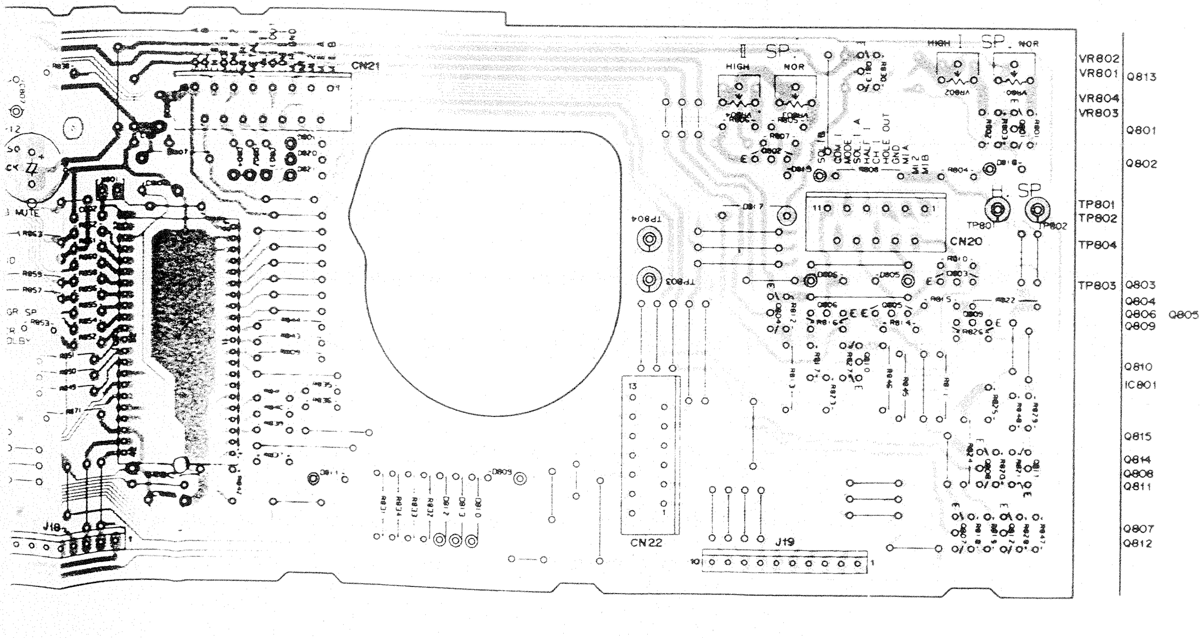
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

AWZ1323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VR801
VR804
VR803
TP801
TP802
TP804
TP803
Q813
Q801
Q802
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Q804
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Q809
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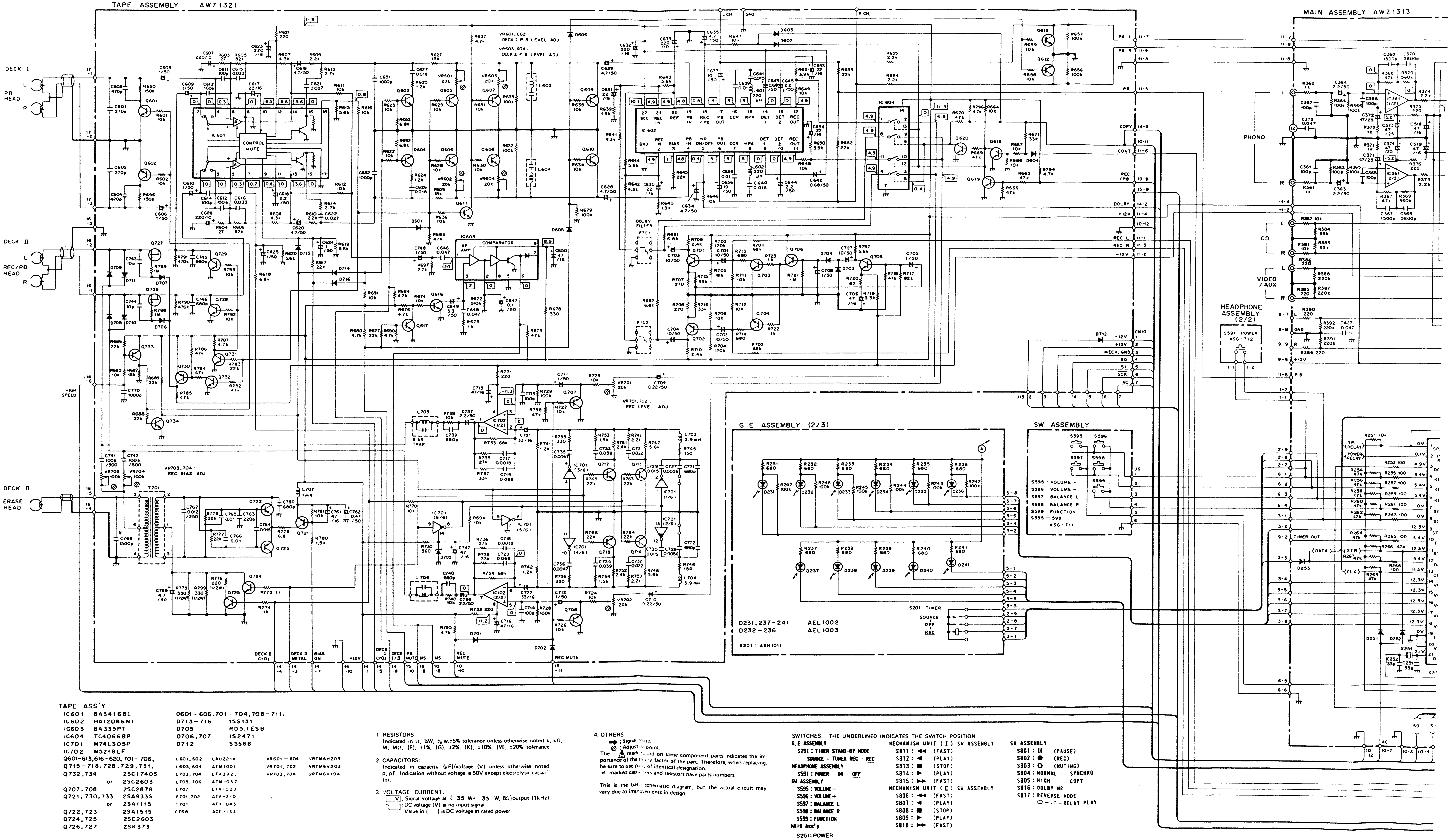
IC801
Q815
Q814
Q808
Q811
Q807
Q812

3. SCHEMATIC DIAGRAM

•FOR SD TYPE


TAPE ASSEMBLY AWZ1321
MAIN ASSEMBLY AWZ1313
DECK I
PB HEAD
DECK II
REC/PB HEAD
ERASE HEAD
HIGH SPEED
IC601
IC602
IC603 COMPARATOR
IC604
VR601, 602 DECK I P.B LEVEL ADJ
VR603, 604 DECK II P.B LEVEL ADJ
VR701, 702 REC LEVEL ADJ
VR703, 704 REC BIAS ADJ
DOLBY FILTER
BIAS TRAP
REC MUTE
PHONO
CD
VIDEO /AUX
HEADPHONE ASSEMBLY (2/2)
S591 POWER ASG-712
G.E ASSEMBLY (2/3)
SW ASSEMBLY
S595 : VOLUME -
S596 : VOLUME +
S597 : BALANCE L
S598 : BALANCE R
S599 : FUNCTION
S595 - 599 ASG-711
S201 TIMER
SOURCE
OFF
REC
D231, 237-241 AEL1002
D232-236 AEL1003
S201 : ASH1011
DECK II CrO2
DECK II METAL
BIAS ON
+12V
DECK I CrO2
DECK I/II
PB MUTE
MS
REC MUTE
TIMER OUT
DATA
STR
CLK

TAPE ASS'Y

IC601	BA3416BL	D601-606, 701-704, 708-711,	
IC602	HA12086NT	D713-716	1SS131
IC603	BA335PT	D705	RD5.1ESB
IC604	TC4066BP	D706, 707	1S2471
IC701	M74LS05P	D712	S5566
IC702	M5218LF		

Q601-613, 616-620, 701-706, Q715-718, 728, 729, 731, Q732, 734	2SC1740S
or	2SC2603
Q707, 708	2SC2878
Q721, 730, 733	2SA933S
or	2SA1115
Q722, 723	2SA1515
Q724, 725	2SC2603
Q726, 727	2SK373

L601, 602	LAU221K
L603, 604	ATM1001
L703, 704	LTA392J
L705, 706	ATM-037
L707	LTA102J
F701, 702	ATF-210
T701	ATX-043
C768	ACE-133

VR601 — 604	VRTM6H203
VR701, 702	VRTM6V203
VR703, 704	VRTM6H104

1. RESISTORS.
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT.
V ; Signal voltage at (35 W+ 35 W, 8Ω)output (1kHz)
; DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power.

4. OTHERS:
➡ ; Signal route.
⊘ ; Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

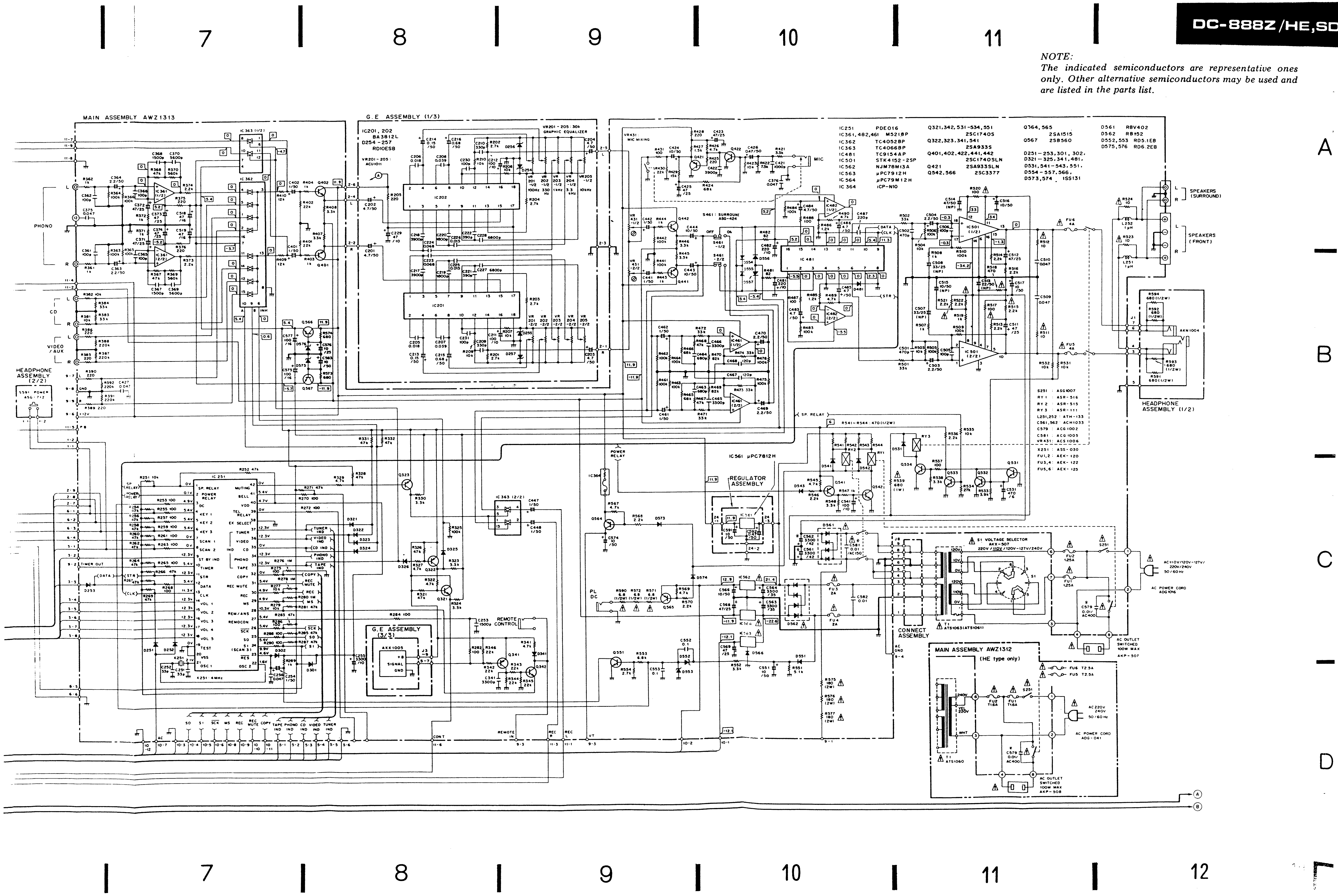
SWITCHES: THE UNDERLINED INDICATES THE SWITCH POSITION

G.E ASSEMBLY
S201 : TIMER STAND-BY MODE
SOURCE - TUNER REC - REC
HEADPHONE ASSEMBLY
S591 : POWER ON - OFF
SW ASSEMBLY
S595 : VOLUME -
S596 : VOLUME +
S597 : BALANCE L
S598 : BALANCE R
S599 : FUNCTION
MAIN Ass'y
S251: POWER
S461: SURROUND

MECHANISM UNIT (I) SW ASSEMBLY
S811 : ◀◀ (FAST)
S812 : ◀ (PLAY)
S813 : ■ (STOP)
S814 : ▶ (PLAY)
S815 : ▶▶ (FAST)
MECHANISM UNIT (II) SW ASSEMBLY
S806 : ◀◀ (FAST)
S807 : ◀ (PLAY)
S808 : ■ (STOP)
S809 : ▶ (PLAY)
S810 : ▶▶ (FAST)

SW ASSEMBLY
S801 : ❚❚ (PAUSE)
S802 : ● (REC)
S803 : ○ (MUTING)
S804 : NORMAL --- SYNCHRO
S805 : HIGH --- COPY
S816 : DOLBY NR
S817 : REVERSE MODE
○ - - - RELAY PLAY

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.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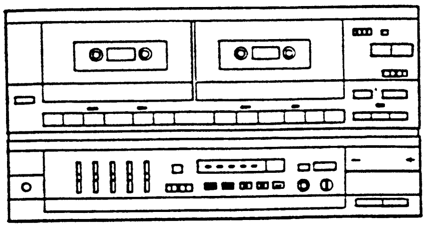
MAIN ASSEMBLY AWZ1313
G.E ASSEMBLY (1/3)
G.E ASSEMBLY (3/3)
HEADPHONE ASSEMBLY (2/2)
HEADPHONE ASSEMBLY (1/2)
REGULATOR ASSEMBLY
CONNECT ASSEMBLY
MAIN ASSEMBLY AWZ1312
(HE type only)
PHONO
CD
VIDEO / AUX
MIC
SPEAKERS (SURROUND)
SPEAKERS (FRONT)
POWER RELAY
REMOTE CONTROL
PL DC
IC201, 202 BA3812L
D254 - 257 RD10ESB
VR201 - 205 : ACU1011
VR201 - 205 : 30k GRAPHIC EQUALIZER
VR431 : MIC MIXING
S461 : SURROUND ASG-424
IC561 μPC7812H
S1 VOLTAGE SELECTOR AKX-507
220V / 110V / 120V - 127V / 240V
AC110V/120V-127V/220V/240V 50/60Hz
AC POWER CORD ADG1016
AC OUTLET SWITCHED 100W MAX AKP-507
AC220V 240V 50/60Hz
AC POWER CORD ADG-041
AC OUTLET SWITCHED 100W MAX AKP-508
T1 ATS1063(ATS1061)
T1 ATS1060
IC251 PDE016
IC361, 482, 461 M5218P
IC362 TC4052BP
IC363 TC4066BP
IC481 TC9154AP
IC501 STK4152-2SP
IC562 NJM78M13A
IC563 μPC7912H
IC564 μPC79M12H
IC 364 ICP-N10
Q321, 342, 531-534, 551 2SC1740S
Q322, 323, 341, 541 2SA933S
Q401, 402, 422, 441, 442 2SC1740SLN
Q421 2SA933SLN
Q542, 566 2SC3377
Q364, 565 2SA1515
Q567 2SB560
D251 - 253, 301, 302, D321 - 325, 341, 481, D531, 541 - 543, 551, D554 - 557, 566, D573, 574 1SS131
D561 RBV402
D562 RB152
D552, 553 RD5.1EB
D575, 576 RD6.2EB
S251 : ASG1007
RY1 : ASR-516
RY2 : ASR-515
RY3 : ASR-111
L251, 252 : ATH-133
C561, 562 : ACH1033
C579 : ACG1002
C581 : ACG1005
VR431 : ACS1006
X251 : ASS-030
FU1, 2 : AEK-120
FU3, 4 : AEK-122
FU5, 6 : AEK-125
FU6 4A
FU5 4A
FU1 1.25A
FU2 1.25A
FU3 2A
FU4 2A
FU1 T1.6A
FU2 T1.6A
FU5 T2.5A
FU6 T2.5A
SP. RELAY
R541 - R544 : 470 (1/2W)
AKN1004
TIMER OUT
CONT
REMOTE IN
REC R
REC L
VT
SO S1 SCK MS REC REC MUTE COPY TAPE IND PHONO IND CD IND VIDEO IND TUNER IND

SERV. 34050

PIONEER
The future of sound and vision.

Service Manual



ORDER NO.
ARP1303-A

STEREO DOUBLE CASSETTE TAPE DECK AMPLIFIER

DC-X88Z

MODEL DC-X88Z COMES IN FIVE VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Power requirement	Export destination
HB	AC 220V,240V (switchable)	United kingdom
HE	AC 220V,240V (switchable)	European continent
HEZ	AC 220V,240V (switchable)	West Germany
YP	AC 240V only	Australia
SD	AC 110V,120-127V,220V,240V (switchable)	General market

- This service manual is applicable to the HB type.
- As to the other types, please refer to additional service manual.
- Ce manual d'instruction se refère au mode de réglage, en français.
- Este manual de servicio trata del método ajuste escrito en español.

CONTENTS

1. SPECIFICATIONS 2
2. PACKING 2
3. EXPLODED VIEWS AND PARTS LIST 3
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   RÉGLAGE 37
   AJUSTE 43
8. MECHANISM OUTLINE 49
9. REMOTE CONTROL 52

[redacted]

PIONEER ELECTRONIC CORPORATION 4-1, Meg
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A. TEL: [213] 835-6177
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 6B8 Canada TEL: [416] 479-4411
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium TEL: 03/775 · 28 · 08
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911
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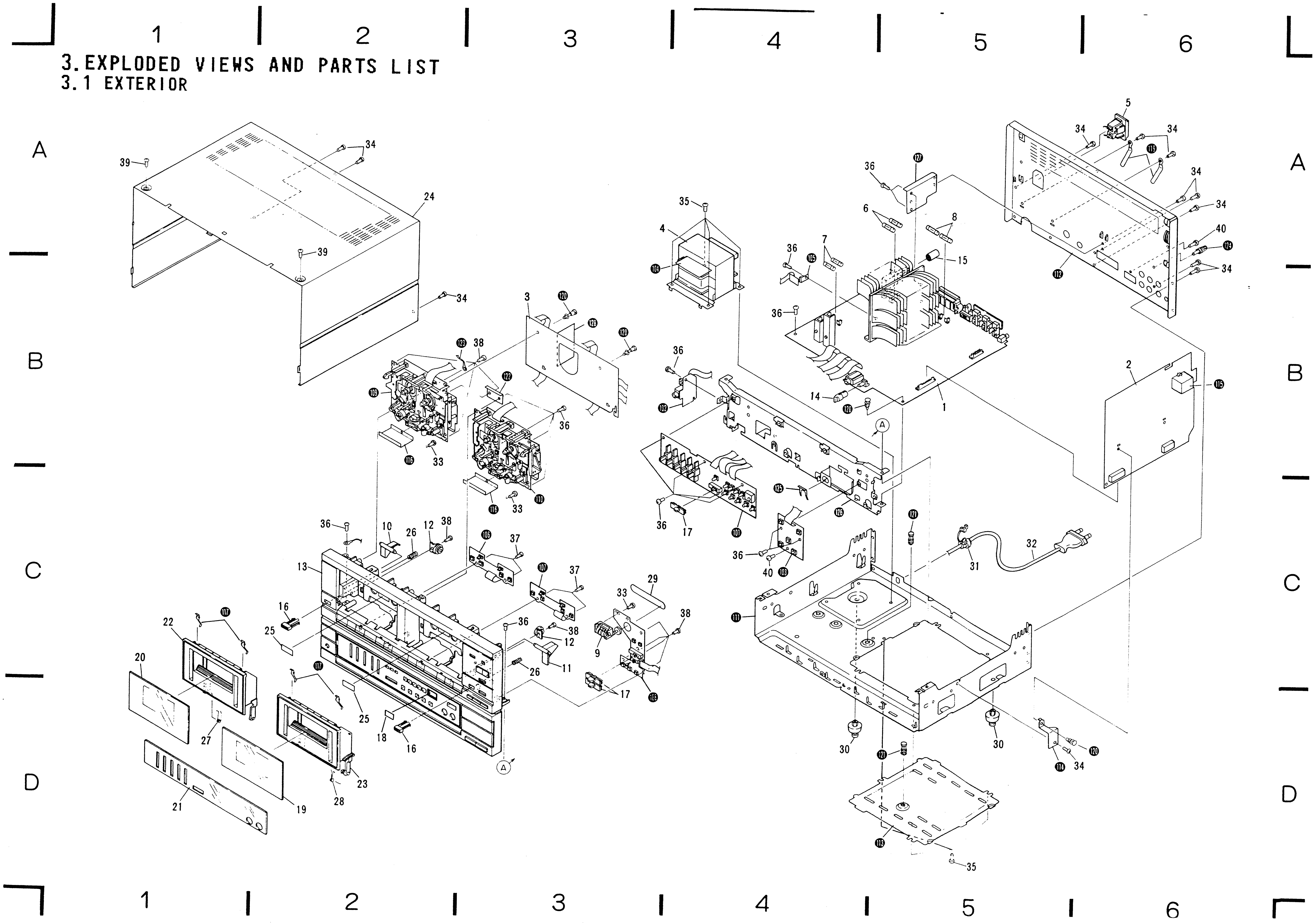
3. EXPLODED VIEWS AND PARTS LIST

3.1 EXTERIOR



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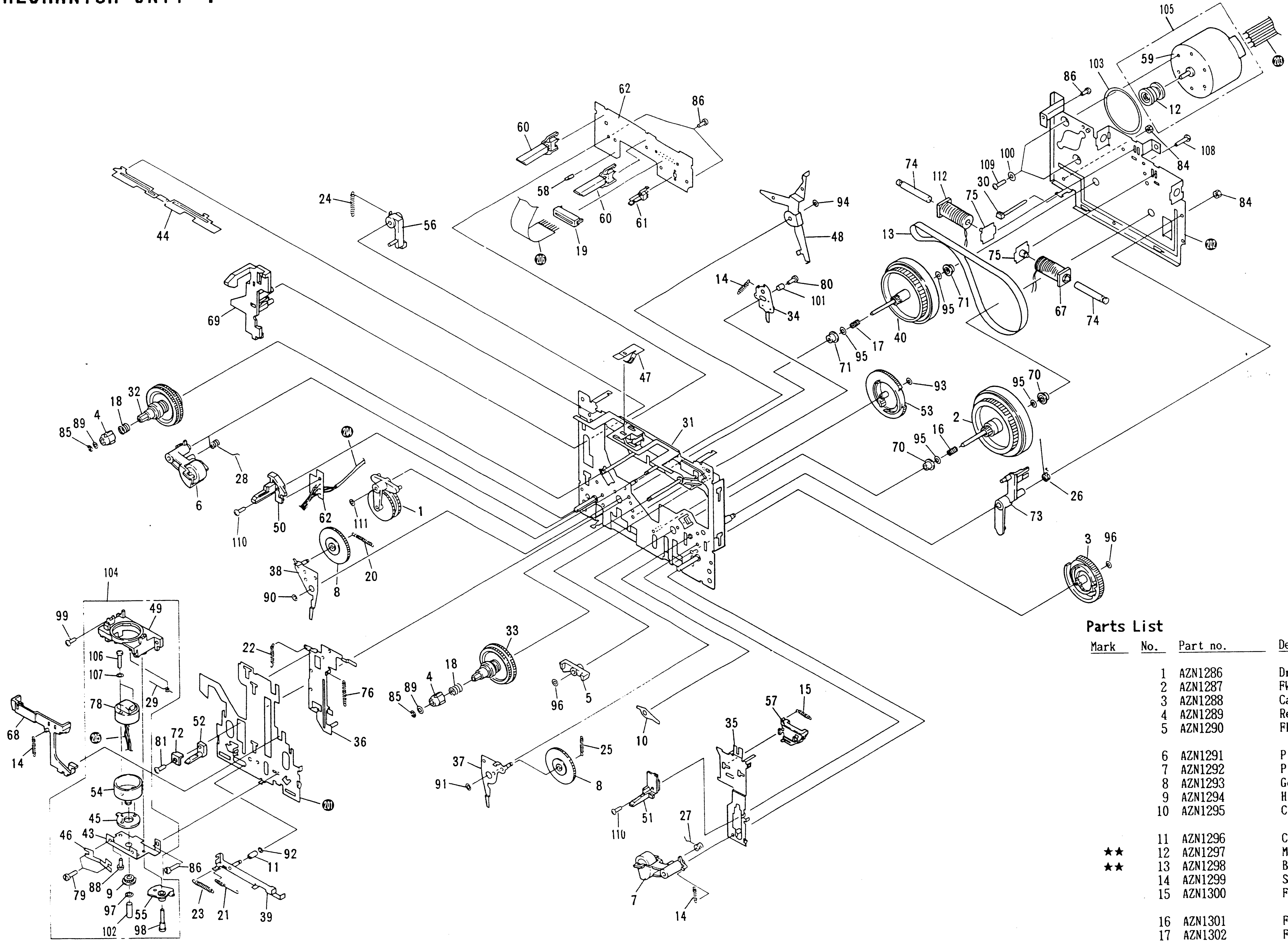
3.2 MECHANISM UNIT I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Parts List

Mark	No.	Part no.	Description
	1	AZN1286	Drive arm assembly
	2	AZN1287	FW assembly A
	3	AZN1288	Cam gear
	4	AZN1289	Reel stopper
	5	AZN1290	FR arm
	6	AZN1291	P arm L assembly
	7	AZN1292	P arm R assembly
	8	AZN1293	Gear A
	9	AZN1294	H gear
	10	AZN1295	CUE arm
	11	AZN1296	Collar C
★★	12	AZN1297	Motor pulley
★★	13	AZN1298	Belt
	14	AZN1299	Spring
	15	AZN1300	FR lever spring
	16	AZN1301	FWF spring
	17	AZN1302	FWR spring
	18	AZN1303	Spring
	19	AZN1305	Cable holder
	20	AZN1306	Spring

Mark	No.	Part no.	Description
	21	AZN1307	Spring
	22	AZN1308	Spring
	23	AZN1309	Spring
	24	AZN1310	Spring
	25	AZN1311	Spring
	26	AZN1312	Spring
	27	AZN1313	Spring
	28	AZN1314	Spring
	29	AZN1315	Spring
	30	AZN1316	Nylon band
	31	AZN1318	Chassis assembly
	32	AZN1319	R reel assembly
	33	AZN1320	F reel assembly
	34	AZN1321	Reverse arm assembly
	35	AZN1322	FR lever assembly
	36	AZN1323	PLAY lever assembly
	37	AZN1324	Gear arm R assembly
	38	AZN1325	Gear arm L assembly
	39	AZN1326	Head lever assembly
	40	AZN1327	FW assembly
	41		. . . . .
	42		. . . . .
	43	AZN1328	Azimuth plate
	44	AZN1329	Switch arm
	45	AZN1330	Head arm
	46	AZN1331	Azimuth spring
	47	AZN1332	Cassette holder
	48	AZN1333	PLAY trigger
	49	AZN1334	Head frame
	50	AZN1335	Cassette guide (L)
	51	AZN1336	Cassette guide (R)
	52	AZN1337	Cassette guide
	53	AZN1338	Cam gear
	54	AZN1339	Head holder
	55	AZN1340	Head gear
	56	AZN1341	Eject arm
	57	AZN1342	Select lever
★★	58	AZE1018	Hole IC
★★	59	AZX1013	Motor
★★	60	AZS1033	Leaf switch
★★	61	AZS1034	Leaf switch
	62	AZN1354	P plate
	63		. . . . .
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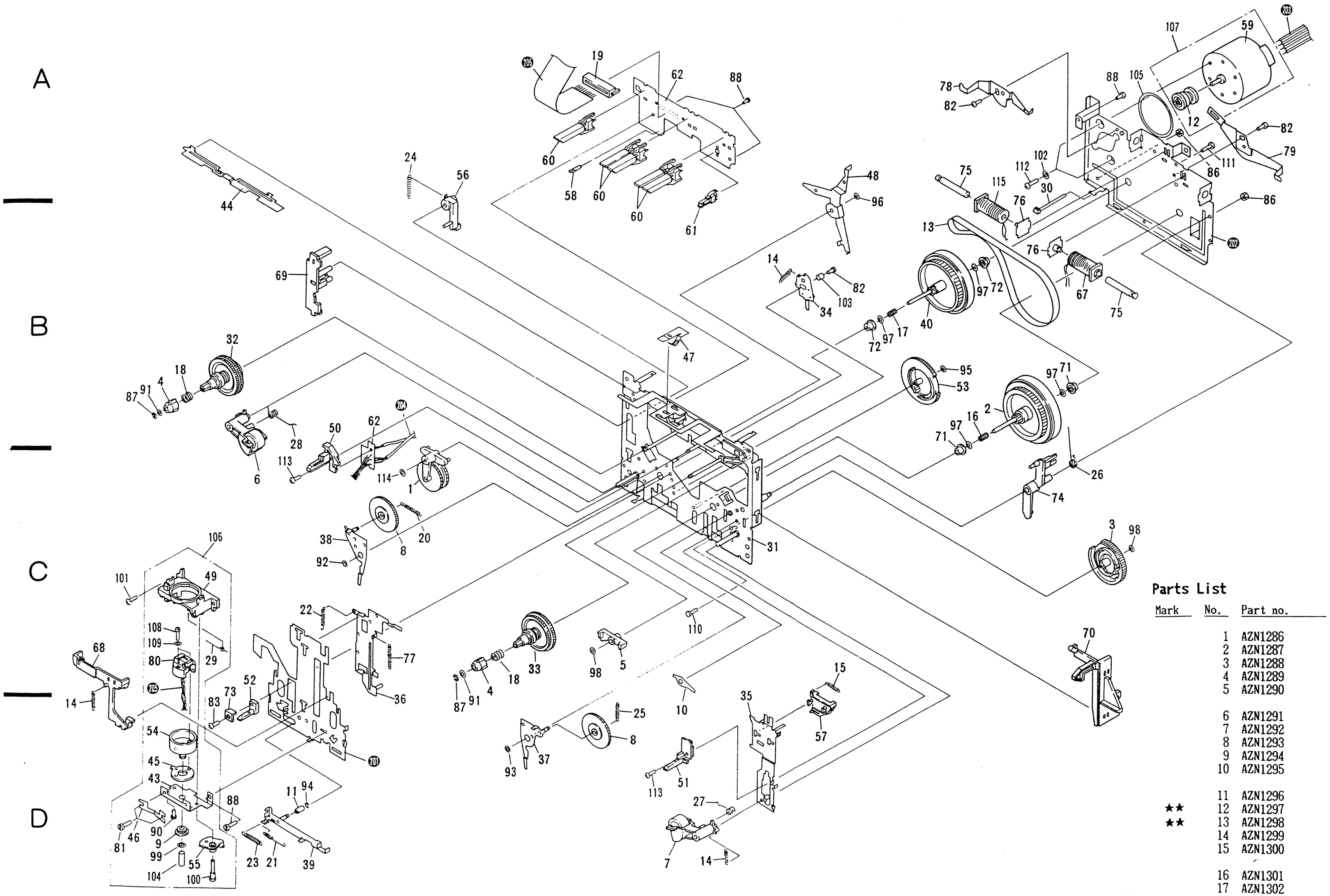
	66		. . . . .
	67	AZS1035	Bobbin
	68	AZN1343	Brake
	69	AZN1353	Latch lever (L)
	70	AZN1346	Metal
	71	AZN1347	Metal
	72	AZN1348	Cushion
	73	AZN1349	Trigger arm
★	74	AZN1350	Solenoid
	75	AZN1351	Solenoid plate assembly
	76	AZN1352	Spring
	77		. . . . .
	78	AZP1015	PLAY head
	79	AZB1079	Stopper A
	80	AZB1080	Screw
	81	AZB1081	Screw
	82		. . . . .
	83		. . . . .
	84	AZB1084	Nut
	85	AZB1085	E ring
	86	AZB1086	Screw
	87		. . . . .
	88	AZB1089	Screw
	89	AZB1090	Washer
	90	AZB1091	Oil stop washer
	91	AZB1092	Oil stop washer
	92	AZB1093	Washer
	93	AZB1094	Washer
	94	AZB1095	Washer
	95	AZB1096	Washer
	96	AZB1097	Washer
	97	AZB1098	Washer
	98	AZB1099	Screw
	99	AZB1100	Screw
	100	AZB1087	Washer
	101	AZB1088	Collar
	102	AZN1317	Tube
	103	AZN1304	Spacer
	104	AZP1017	Head frame assembly
★★	105	AZX1014	Motor assembly
	106	AZB1101	Screw
	107	AZB1102	Spring washer
	108	AZB1104	Screw
	109	AZB1105	Screw
	110	AZB1106	Screw
	111	AZB1107	Washer
	112	AZS1036	Bobbin
	201		Head board
	202		Fly wheel holder
	203		Jumper
	204		Head lead
	205		Lead wire
	206		Lead wire

3.3 MECHANISM UNIT II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Parts List

Mark	No.	Part no.	Description
	1	AZN1286	Drive arm assembly
	2	AZN1287	FW assembly A
	3	AZN1288	Cam gear
	4	AZN1289	Reel stopper
	5	AZN1290	FR arm
	6	AZN1291	P arm L assembly
	7	AZN1292	P arm R assembly
	8	AZN1293	Gear A
	9	AZN1294	H gear A
	10	AZN1295	CUE arm
	11	AZN1296	Collar C
★★	12	AZN1297	Motor pulley
★★	13	AZN1298	Belt
	14	AZN1299	Spring
	15	AZN1300	FR lever spring
	16	AZN1301	FWF spring
	17	AZN1302	FWR spring
	18	AZN1303	Spring
	19	AZN1305	Cable holder
	20	AZN1306	Spring

Mark	No.	Part no.	Description
	21	AZN1307	Spring
	22	AZN1308	Spring
	23	AZN1309	Spring
	24	AZN1310	Spring
	25	AZN1311	Spring
	26	AZN1312	Spring
	27	AZN1313	Spring
	28	AZN1314	Spring
	29	AZN1315	Spring
	30	AZN1316	Nylon band
	31	AZN1318	Chassis assembly
	32	AZN1319	R reel assembly
	33	AZN1320	F reel assembly
	34	AZN1321	Reverse arm assembly
	35	AZN1322	FR lever assembly
	36	AZN1323	PLAY lever assembly
	37	AZN1324	Gear arm R assembly
	38	AZN1325	Gear arm L assembly
	39	AZN1326	Head lever assembly
	40	AZN1327	FW assembly
	41		・・・・・
	42		・・・・・
	43	AZN1328	Azimuth plate
	44	AZN1329	Switch arm
	45	AZN1330	Head arm
	46	AZN1331	Azimuth spring
	47	AZN1332	Cassette holder
	48	AZN1333	PLAY trigger
	49	AZN1334	Head frame
	50	AZN1335	Cassette guide (L)
	51	AZN1336	Cassette guide (R)
	52	AZN1337	Cassette guide
	53	AZN1338	Cam gear
	54	AZN1339	Head holder
	55	AZN1340	Head gear
	56	AZN1341	Eject arm
	57	AZN1342	Select lever
★★	58	AZE1018	Hole IC
★★	59	AZX1013	Motor
★★	60	AZS1033	Leaf switch
★★	61	AZS1034	Leaf switch
	62	AZN1355	P plate
	63		・・・・・
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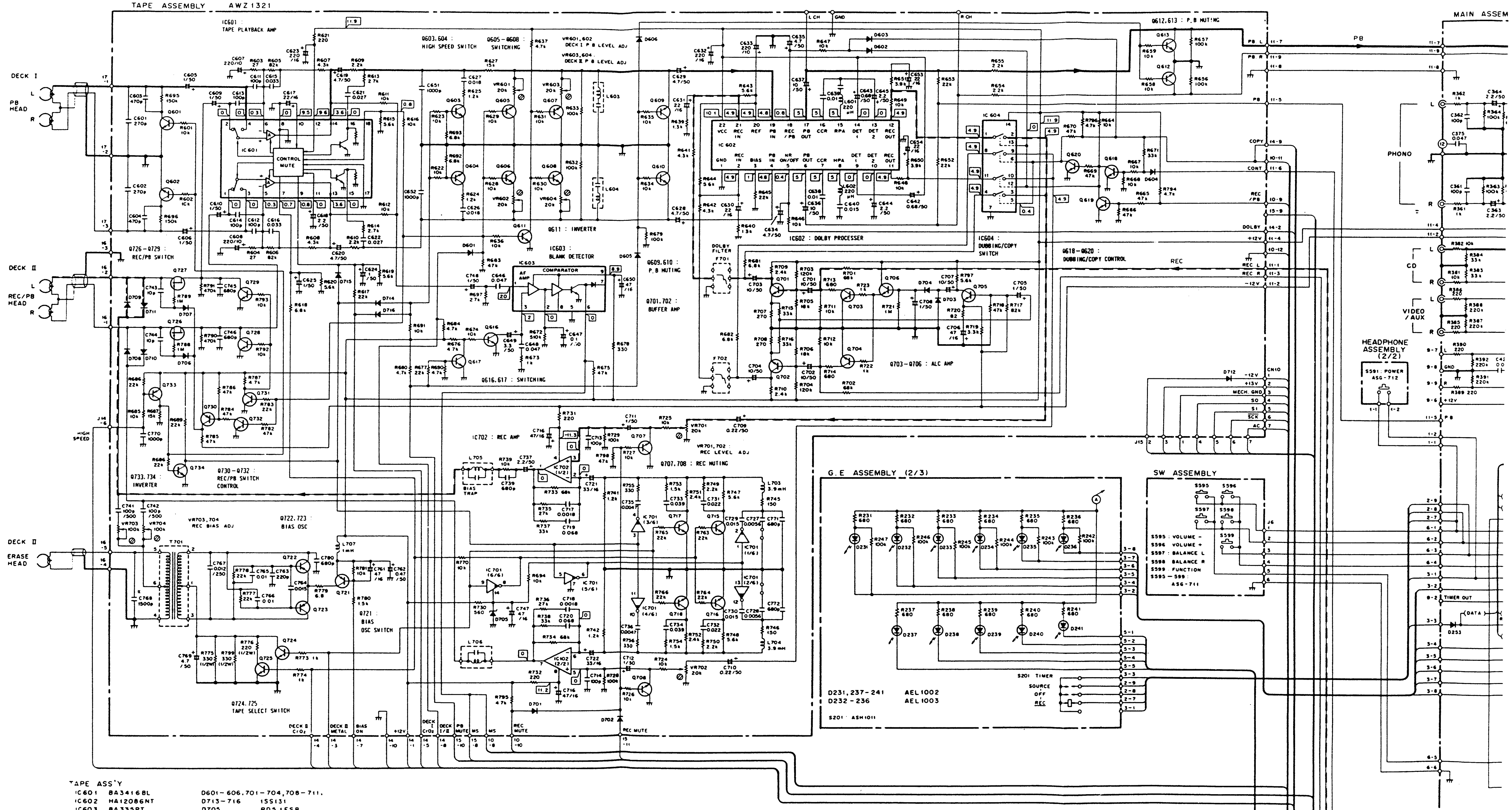
	65		・・・・・
	66		・・・・・
	67	AZS1035	Bobbin
	68	AZN1343	Brake
	69	AZN1344	Eject lever (L)
	70	AZN1345	Eject lever (R)
	71	AZN1346	Metal
	72	AZN1347	Metal
	73	AZN1348	Cushion
	74	AZN1349	Trigger arm
★	75	AZN1350	Solenoid
	76	AZN1351	Solenoid plate assembly
	77	AZN1352	Spring
	78	AZN1356	Arm eject (L)
	79	AZN1357	Arm eject (R)
	80	AZP1014	REC/PLAY/ERASE head
	81	AZB1079	Stopper A
	82	AZB1080	Screw
	83	AZB1081	Screw
	84		・・・・・
	85		・・・・・
	86	AZB1084	Nut
	87	AZB1085	E ring
	88	AZB1086	Screw
	89		・・・・・
	90	AZB1089	Screw
	91	AZB1090	M nut
	92	AZB1091	Washer
	93	AZB1092	Oil stop washer
	94	AZB1093	Oil stop washer
	95	AZB1094	Washer
	96	AZB1095	Washer
	97	AZB1096	Washer
	98	AZB1097	Washer
	99	AZB1098	Washer
	100	AZB1099	Screw
	101	AZB1100	Screw
	102	AZB1087	Washer
	103	AZB1088	Collar
	104	AZN1317	Tube
	105	AZN1304	Spacer
	106	AZP1016	Head frame assembly
★★	107	AZX1014	Motor assembly
	108	AZB1101	Screw
	109	AZB1102	Spring washer
	110	AZB1103	Screw
	111	AZB1104	Screw
	112	AZB1105	Screw
	113	AZB1106	Screw
	114	AZB1107	Washer
	115	AZS1036	Bobbin
	201		Head board
	202		Fly wheel holder
	203		Jumper
	204		Head lead
	205		Lead wire
	206		Lead wire

4. SCHEMATIC DIAGRAM


1
2
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4
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6
A
B
C
D
TAPE ASSEMBLY AWZ1321
IC601 TAPE PLAYBACK AMP
DECK I
PB HEAD
DECK II
REC/PB HEAD
ERASE HEAD
HIGH SPEED
CONTROL MUTE
Q603.604 : HIGH SPEED SWITCH
Q605-Q608 : SWITCHING
VR601,602 DECK I P.B LEVEL ADJ
VR603,604 DECK II P.B LEVEL ADJ
Q611 : INVERTER
IC603 : BLANK DETECTOR
COMPARATOR
AF AMP
Q616.617 : SWITCHING
Q609.610 : P.B MUTING
Q701.702 : BUFFER AMP
IC602 : DOLBY PROCESSER
DOLBY FILTER
IC604 : DUBBING/COPY SWITCH
Q612.613 : P.B MUTING
Q618-Q620 : DUBBING/COPY CONTROL
Q703-Q706 : ALC AMP
Q726-Q729 : REC/PB SWITCH
Q733.734 : INVERTER
Q730-Q732 : REC/PB SWITCH CONTROL
IC702 : REC AMP
VR701,702 : REC LEVEL ADJ
Q707.708 : REC MUTING
BIAS TRAP
VR703,704 : REC BIAS ADJ
Q722.723 : BIAS OSC
Q721 : BIAS OSC SWITCH
Q724.725 : TAPE SELECT SWITCH
G.E ASSEMBLY (2/3)
SW ASSEMBLY
S595 : VOLUME -
S596 : VOLUME +
S597 : BALANCE L
S598 : BALANCE R
S599 : FUNCTION
S595-599 : ASG-711
HEADPHONE ASSEMBLY (2/2)
S591 : POWER ASG-712
D231,237-241 AEL1002
D232-236 AEL1003
S201 : ASH1011
S201 TIMER SOURCE OFF REC
MAIN ASSEM
PB
PHONO
CD
VIDEO / AUX
REC
DECK II CrO2
DECK II METAL
BIAS ON
+12V
DECK I CrO2
DECK I/II
PB MUTE
MS
REC MUTE

TAPE ASS'Y

IC601	BA3416BL
IC602	HA12086NT
IC603	BA335PT
IC604	TC4066BP
IC701	M74LS05P
IC702	M5218LF
Q601-613,616-620, 701-706, Q715-718, 728, 729, 731, Q732, 734	2SC1740S or 2SC2603
Q707, 708	2SC2878
Q721, 730, 733	2SA933S or 2SA1115
Q722, 723	2SA1515
Q724, 725	2SC2603
Q726, 727	2SK373

D601-606, 701-704, 708-711, D713-716	1SS131
D705	RD5.1ESB
D706, 707	1S2471
D712	S5566

L601, 602	LAU221K
L603, 604	ATM1001
L703, 704	LTA392J
L705, 706	ATM-037
L707	LTA102J
F701, 702	ATF-210
T701	ATX-043
C768	ACE-133

VR601-604	VRTM6H203
VR701, 702	VRTM6V203
VR703, 704	VRTM6H104

1. RESISTORS
Indicated in Ω, ¼W, ⅙W, ±5% tolerance unless otherwise noted k; kΩ, M, MΩ, (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% tolerance

2. CAPACITORS
Indicated in capacity (μF)/voltage (V) unless otherwise noted p, pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT
V : Signal voltage at (W+   W, 8Ω) output (1kHz)
: DC voltage (V) at no input signal
Value in (   ) is DC voltage at rated power.

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point

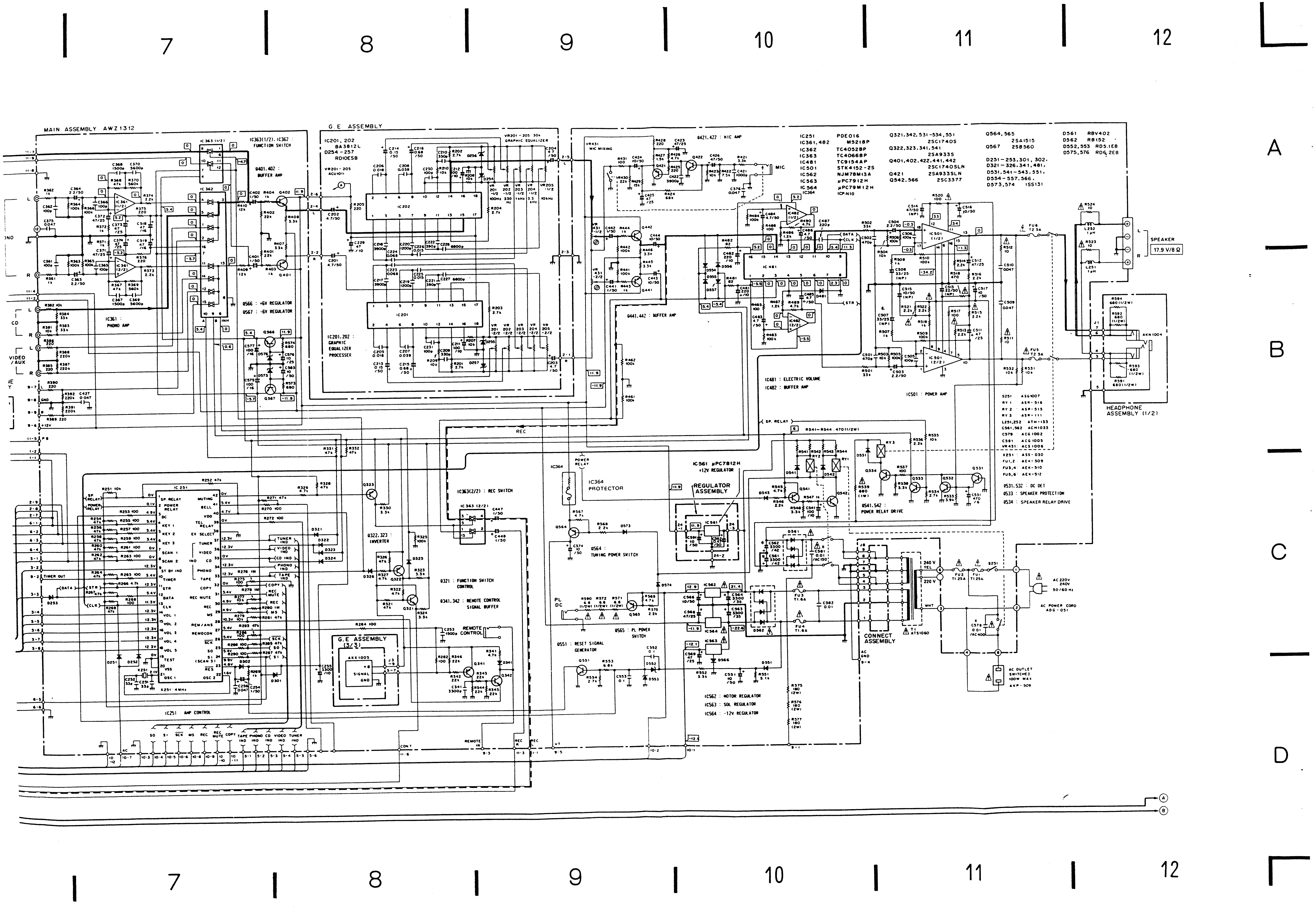
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
⋌ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

SWITCHES:
G.E ASSEMBLY
S201 : TIMER STAND-BY MODE
SOURCE - TUNER REC - REC
HEADPHONE ASSEMBLY
S591 : POWER ON - OFF
SW ASSEMBLY
S595 : VOLUME -
S596 : VOLUME +
S597 : BALANCE L
S598 : BALANCE R
S599 : FUNCTION
MAIN Ass'y
S251 : SURROUND
The underlined indicates the switch position.

——— : Playback signal route
·········· : Recording signal route

1 2 3 4 5 6


7
8
9
10
11
12
A
B
C
D
MAIN ASSEMBLY AWZ1312
G.E ASSEMBLY
IC363(1/2). IC362 : FUNCTION SWITCH
Q401.402 : BUFFER AMP
IC361 : PHONO AMP
Q566 : +6V REGULATOR
Q567 : -6V REGULATOR
IC201, 202 BA3812L
D254-257 RD10ESB
VR201-205 ACU1011
IC201.202 : GRAPHIC EQUALIZER PROCESSER
VR201-205 : 30k GRAPHIC EQUALIZER
100Hz 330Hz 1kHz 3.3kHz 10kHz
VR431 MIC MIXING
Q421.422 : MIC AMP
MIC
Q441.442 : BUFFER AMP
IC251 PDE016
IC361, 482 M5218P
IC362 TC4052BP
IC363 TC4066BP
IC481 TC9154AP
IC501 STK4152-2S
IC562 NJM78M13A
IC563 μPC7912H
IC 564 μPC79M12H
IC364 ICP-N10
Q321,342,531-534,551 2SC1740S
Q322,323,341,541 2SA933S
Q401,402,422,441,442 2SC1740SLN
Q421 2SA933SLN
Q542,566 2SC3377
Q564,565 2SA1515
Q567 2SB560
D251-253,301, 302, D321-326,341,481, D531,541-543,551, D554-557,566, D573,574 1SS131
D561 RBV402
D562 RB152
D552,553 RD5.1EB
D575,576 RD6.2EB
IC481 : ELECTRIC VOLUME
IC482 : BUFFER AMP
IC501 : POWER AMP
SPEAKER
17.9 V/8 Ω
HEADPHONE ASSEMBLY (1/2)
S251 ASG1007
RY 1 ASR-516
RY 2 ASR-515
RY 3 ASR-111
L251,252 ATH-133
C561,562 ACH1033
C579 ACG1002
C581 ACG1005
VR431: ACS1006
X251 : ASS-030
FU1,2 : AEK-509
FU3,4 : AEK-510
FU5,6 : AEK-512
Q531.532 : DC DET
Q533 : SPEAKER PROTECTION
Q534 : SPEAKER RELAY DRIVE
SP. RELAY
R541-R544 : 470(1/2W)
Q541.542 : POWER RELAY DRIVE
IC561 μPC7812H +12V REGULATOR
REGULATOR ASSEMBLY
IC364 PROTECTOR
POWER RELAY
Q564 : TUNING POWER SWITCH
Q565 : PL POWER SWITCH
Q551 : RESET SIGNAL GENERATOR
PL DC
IC562 : MOTOR REGULATOR
IC563 : SOL REGULATOR
IC564 : -12V REGULATOR
CONNECT ASSEMBLY
240 V
220 V
YEL
WHT
T1 ATS1060
AC 220V 240V 50/60 Hz
AC POWER CORD ADG-051
AC OUTLET SWITCHED 100W MAX AKP-509
AC GND
REC
IC363(2/2) : REC SWITCH
Q322,323 : INVERTER
Q321 : FUNCTION SWITCH CONTROL
Q341.342 : REMOTE CONTROL SIGNAL BUFFER
REMOTE CONTROL
G.E ASSEMBLY (3/3)
AXK1005
SIGNAL
GND
IC251 AMP CONTROL
X251 4MHz
SP RELAY
POWER RELAY
TIMER OUT
DATA
STR
CLK
TUNER IND
VIDEO IND
CD IND
PHONO IND
TAPE IND
COPY
REC MUTE
REC
MS
SCK
SO
SI
SO SI SCK MS REC REC MUTE COPY TAPE IND PHONO IND CD IND VIDEO IND TUNER IND
CONT
REMOTE IN
VT
L
R
PHONO
CD
VIDEO /AUX

1. RESISTORS.
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K), ±10%, (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT.
V : Signal voltage at (40 W + 40 W, 8Ω)output (1kHz)
: DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power.

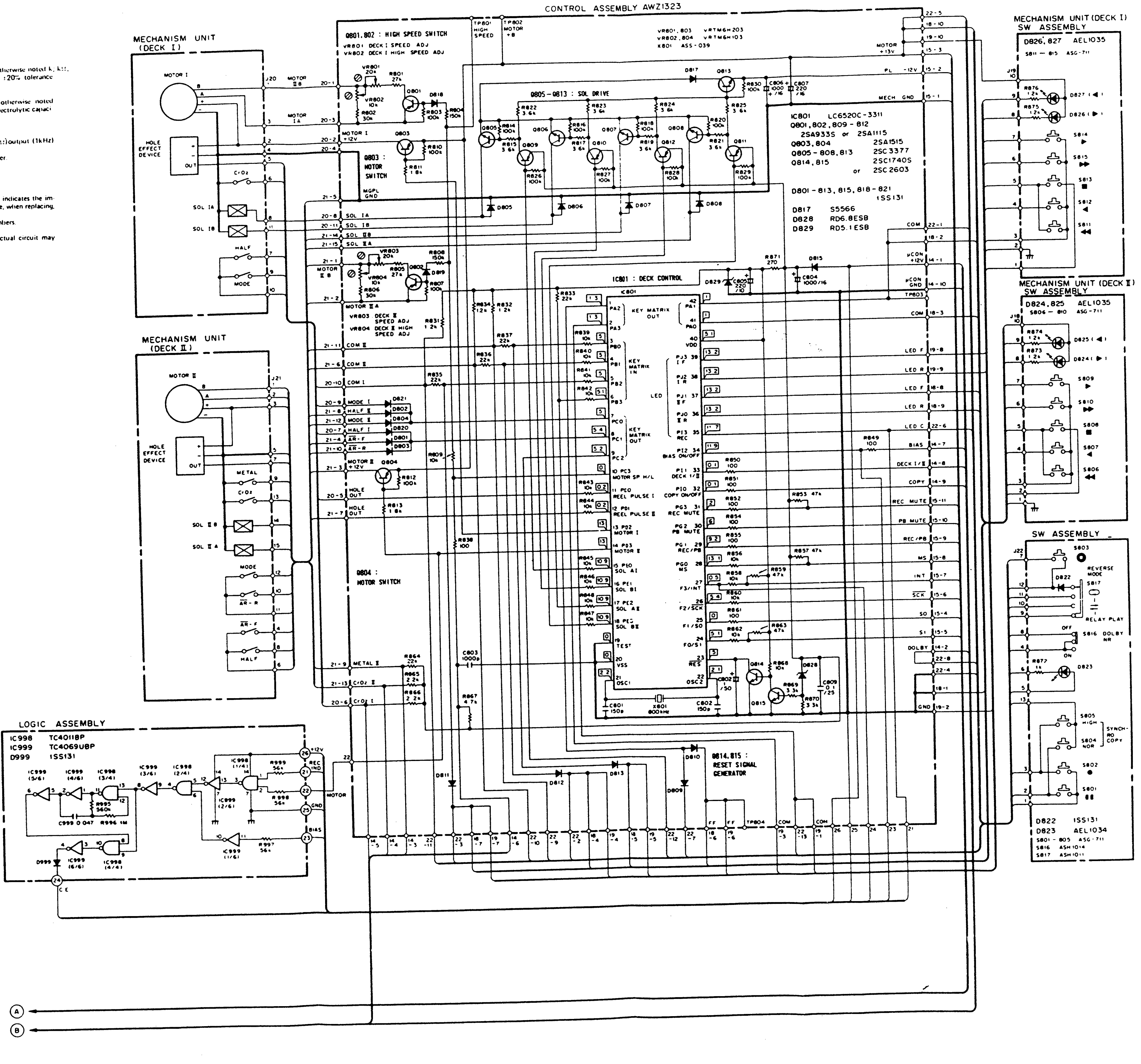
4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
≉ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

SWITCHES.
MECHANISM UNIT (I) SW ASSEMBLY
- S811 : ◀◀ (FAST)
- S812 : ◀ (PLAY)
- S813 : ■ (STOP)
- S814 : ▶ (PLAY)
- S815 : ▶▶ (FAST)

MECHANISM UNIT (II) SW ASSEMBLY
- S806 : ◀◀ (FAST)
- S807 : ◀ (PLAY)
- S808 : ■ (STOP)
- S809 : ▶ (PLAY)
- S810 : ▶▶ (FAST)

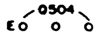
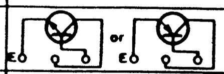
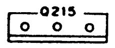
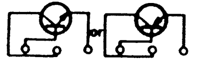
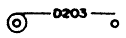
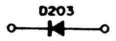
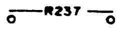
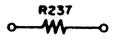
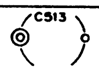
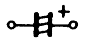
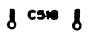
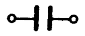
SW ASSEMBLY
- S801 : ❚❚ (PAUSE)
- S802 : ● (REC)
- S803 : ○ (MUTING)
- S804 : NORMAL —┐ SYNCHRO
- S805 : HIGH —┘ COPY
- S816 : DOLBY NR
- S817 : REVERSE MODE
  ○—⇄—RELAY PLAY


1
2
3
4
5
A
B
C
D
CONTROL ASSEMBLY AWZ1323
MECHANISM UNIT (DECK I)
MECHANISM UNIT (DECK II)
MOTOR I
MOTOR II
HOLE EFFECT DEVICE
SOL I A
SOL I B
SOL II B
SOL II A
HALF
MODE
METAL
CrO2
AR-R
AR-F
Q801,802 : HIGH SPEED SWITCH
VR801 DECK I SPEED ADJ
VR802 DECK I HIGH SPEED ADJ
VR803 DECK II SPEED ADJ
VR804 DECK II HIGH SPEED ADJ
Q803 : MOTOR SWITCH
Q804 : MOTOR SWITCH
Q805 - Q813 : SOL DRIVE
VR801, 803 VRTM6H203
VR802, 804 VRTM6H103
X801 ASS-039
IC801 LC6520C-3311
Q801, 802, 809 - 812 2SA933S or 2SA1115
Q803, 804 2SA1515
Q805 - 808, 813 2SC3377
Q814, 815 2SC1740S or 2SC2603
D801 - 813, 815, 818 - 821 1SS131
D817 S5566
D828 RD6.8ESB
D829 RD5.1ESB
IC801 : DECK CONTROL
KEY MATRIX OUT
KEY MATRIX IN
LED
Q814, 815 : RESET SIGNAL GENERATOR
MOTOR +13V
PL -12V
MECH GND
COM
μCON +12V
μCON GND
TP803
LED F
LED R
LED C
BIAS
DECK I/II
COPY
REC MUTE
PB MUTE
REC/PB
MS
INT
SCK
SO
SI
DOLBY
GND
LOGIC ASSEMBLY
IC998 TC4011BP
IC999 TC4069UBP
D999 1SS131
+12V
REC IND
MOTOR
GND
BIAS
CE
MECHANISM UNIT (DECK I) SW ASSEMBLY
D826, 827 AEL1035
S811 — 815 ASG-711
MECHANISM UNIT (DECK II) SW ASSEMBLY
D824, 825 AEL1035
S806 — 810 ASG-711
SW ASSEMBLY
REVERSE MODE
RELAY PLAY
DOLBY NR
OFF
ON
SYNCHRO COPY
D822 1SS131
D823 AEL1034
S801 - 805 ASG-711
S816 ASH1014
S817 ASH1011
Ⓐ
Ⓑ

5. P. C. BOARDS CONNECTION DIAGRAM

NOTE

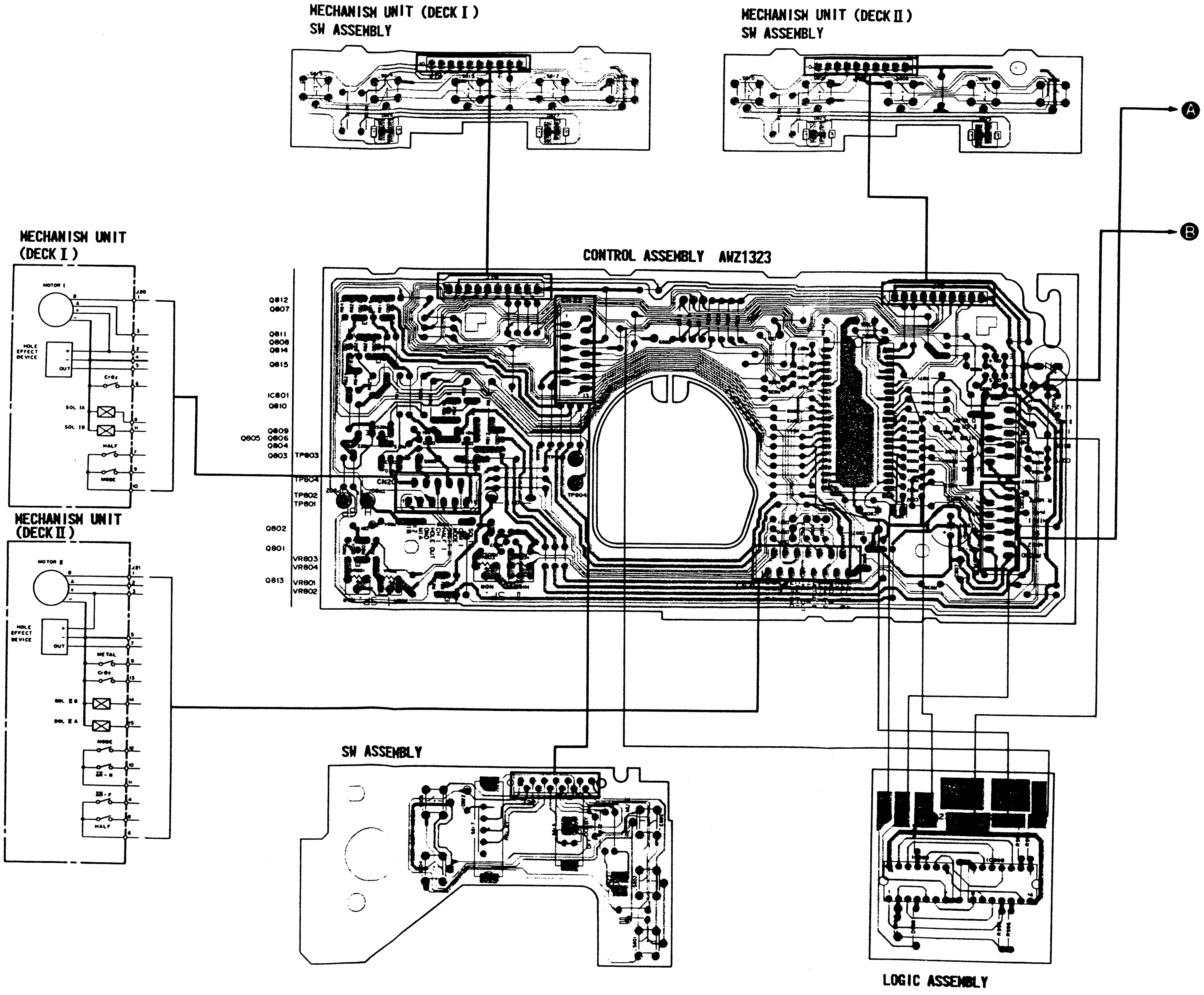
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

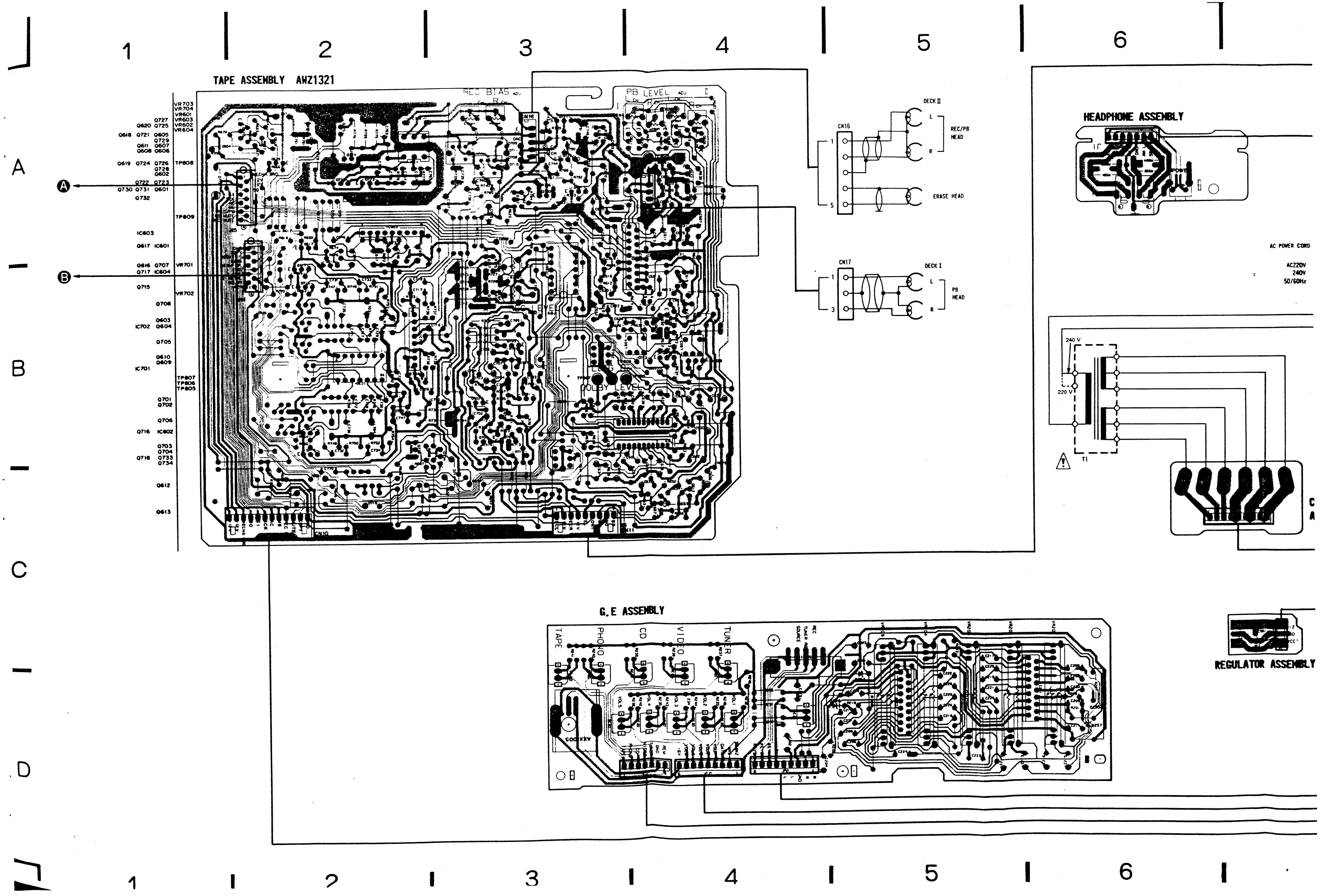
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

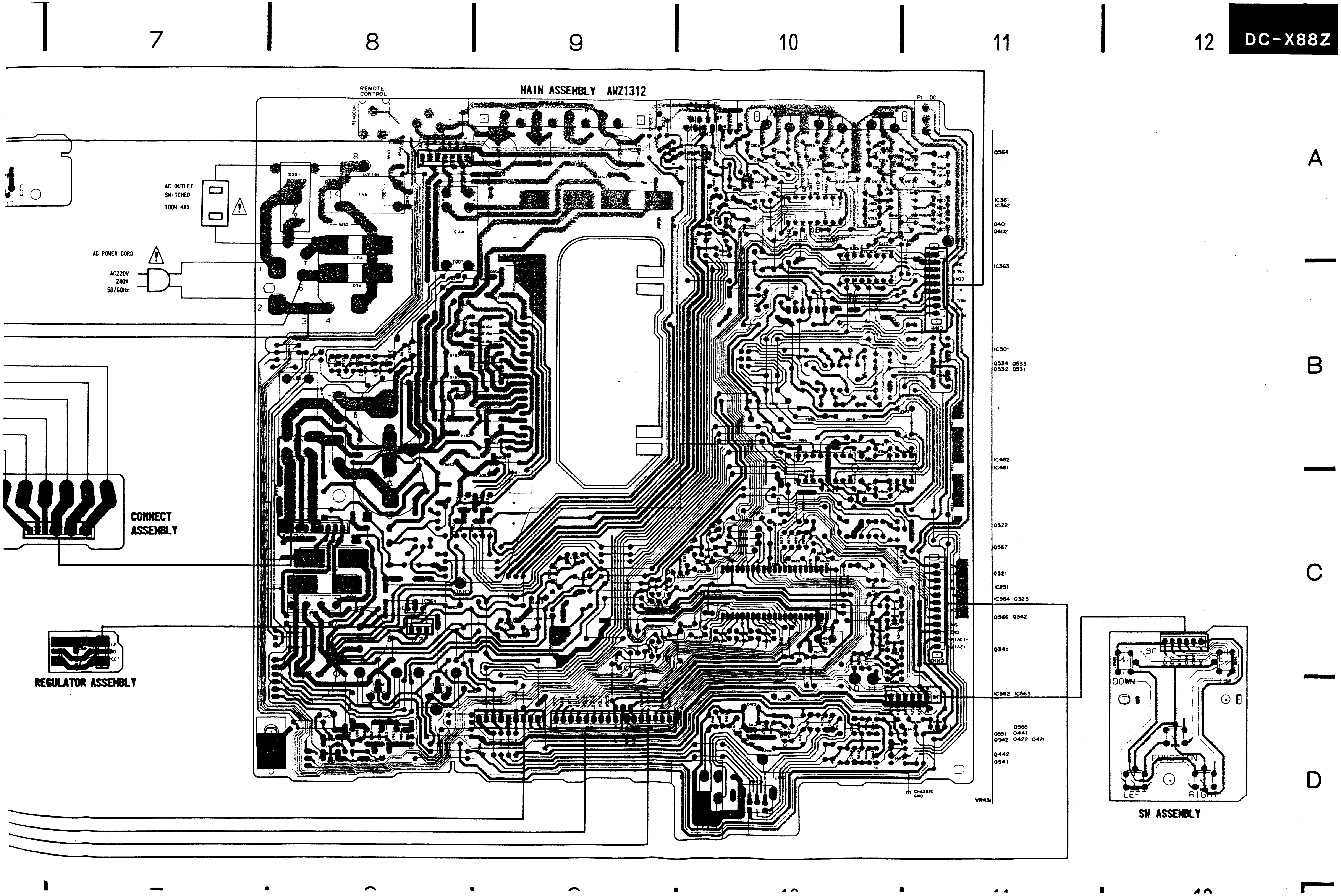
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


MECHANISM UNIT (DECK I)
SW ASSEMBLY
MECHANISM UNIT (DECK II)
SW ASSEMBLY
A
B
MECHANISM UNIT (DECK I)
MOTOR I
HOLE EFFECT DEVICE
OUT
CrO2
SOL IA
SOL IB
HALF
MODE
MECHANISM UNIT (DECK II)
MOTOR II
HOLE EFFECT DEVICE
OUT
METAL
CrO2
SOL IIB
SOL IIA
MODE
HALF
CONTROL ASSEMBLY AWZ1323
Q812
Q807
Q811
Q808
Q814
Q815
IC801
Q810
Q809
Q805
Q806
Q804
Q803
TP803
TP804
TP802
TP801
CN20
Q802
Q801
VR803
VR804
Q813
VR801
VR802
SW ASSEMBLY
LOGIC ASSEMBLY


1
2
3
4
5
6
A
B
C
D
TAPE ASSEMBLY AWZ1321
VR703
VR704
VR601
VR603
VR602
VR604
Q727
Q620 Q725
Q618 Q721 Q605
Q729
Q611 Q607
Q608 Q606
Q619 Q724 Q726
TP808
Q728
Q602
Q722 Q723
Q730 Q731 Q601
Q732
TP809
IC603
Q617 IC601
Q616 Q707
VR701
Q717 IC604
Q715
VR702
Q708
Q603
IC702 Q604
Q705
Q610
Q609
IC701
TP807
TP806
TP805
Q701
Q702
Q706
Q716 IC602
Q703
Q704
Q718 Q733
Q734
Q612
Q613
A
B
REC BIAS ADJ
L CH R CH
PB LEVEL ADJ
CN16
CN10
CN11
DOLBY LEVEL
DECK II
CN16
1
5
L
R
REC/PB HEAD
ERASE HEAD
CN17
DECK I
1
3
L
R
PB HEAD
HEADPHONE ASSEMBLY
AC POWER CORD
AC220V
240V
50/60Hz
240 V
220 V
T1
C
A
G.E ASSEMBLY
TAPE
PHONO
CD
VIDEO
TUNER
REC
TUNER
SOURCE
VOL.5
VOL.4
VOL.3
VOL.2
VOL.1
AXX005
REM
GND
+6V
L
L
GND
R
R
REGULATOR ASSEMBLY


7
8
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10
11
12
A
B
C
D
MAIN ASSEMBLY AWZ1312
REMOTE CONTROL
PL. DC
AC OUTLET SWITCHED
100W MAX
AC POWER CORD
AC220V
240V
50/60Hz
S251 POWER
RELAY
FU1
FU2
1
2
3
4
6
7
8
CONNECT ASSEMBLY
REGULATOR ASSEMBLY
IC561
GND
CN11
CN1
CHASSIS GND
VR431
Q564
IC361
IC362
Q401
Q402
IC363
IC501
Q534 Q533
Q532 Q531
IC482
IC481
Q322
Q567
Q321
IC251
IC564 Q323
Q566 Q342
Q341
IC562 IC563
Q565
Q551 Q441
Q542 Q422 Q421
Q442
Q541
J6
DOWN
UP
FUNCTION
LEFT
RIGHT
SW ASSEMBLY

6. ELECTRICAL PARTS LIST

NOTES:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

  560Ω 56 × 10^1 561..........................RD1/4PS $\boxed{5}$ $\boxed{6}$ $\boxed{1}$ J
  47kΩ 47 × 10^3 473..........................RD1/4PS $\boxed{4}$ $\boxed{7}$ $\boxed{3}$ J
  0.5Ω 0R5...RN2H $\boxed{0}$ $\boxed{R}$ $\boxed{5}$ K
  1Ω 010...RS1P $\boxed{0}$ $\boxed{1}$ $\boxed{0}$ K

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
  5.62kΩ 562 × 10^1 5621........................RN1/4SR $\boxed{5}$ $\boxed{6}$ $\boxed{2}$ $\boxed{1}$ F
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Miscellaneous Parts

Mark	Symbol & Description	Part No.
	MAIN assembly	AWZ1312
	G.E assembly	Non supply
	Headphone assembly	Non supply
	SW assembly	Non supply
	REGULATOR assembly	Non supply
	CONNECT assembly	Non supply
	TAPE assembly	AWZ1321
	CONTROL assembly	AWZ1323
	Mechanism unit (I) SW assembly	Non supply
	Mechanism unit (II) SW assembly	Non supply
	SW assembly	Non supply
	LOGIC assembly	Non supply
⚠ ★	T1 Power transformer	ATS1060
⚠	AC Socket (AC OUTLET)	AKP-509
⚠★★	FU1,FU2 Fuse (T1.25A)	AEK-509
⚠★★	FU3,FU4 Fuse (T1.6A)	AEK-510
⚠★★	FU5,FU6 Fuse (T2.5A)	AEK-512
⚠	AC power cord	ADG-051
⚠	Strain relief	AEC-882

MAIN Assembly (AWZ1312)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC361, IC482	M5218P
⚠★★	IC562	NJM78M13A
★★	IC251	PDE016
⚠★★	IC501	STK4152-2SP
★★	IC362	TC4052BP
★★	IC364	ICP-N10
★★	IC363	TC4066BP
★★	IC481	TC9154AP
⚠★★	IC564	μPC79M12H
⚠★★	IC563	μPC7912H
★★	Q564,Q565	2SA1515
★★	Q322,Q323,Q341,Q541	2SA933S
★★	Q421	2SA933SLN
★★	Q567	2SB560
★★	Q321,Q342,Q531－Q534,Q551	2SC1740S
★★	Q401,Q402,Q422,Q441,Q442	2SC1740SLN
★★	Q542,Q566	2SC3377
⚠ ★	D561	RBV402
★	D552,D553	RD5.1EB
★	D575,D576	RD6.2EB
⚠ ★	D562	RB152
★	D251－D253,D301,D302, D321－D325,D341,D481,D531, D541－D543,D551,D554－D557, D566,D573,D574	1SS131

SWITCH AND RELAYS

Mark	Symbol & Description	Part No.
⚠★★	S251 Push switch	ASG1007
★★	RY3 Relay	ASR-111
★★	RY2 Relay	ASR-515
★★	RY1 Relay	ASR-516

COILS

Mark	Symbol & Description	Part No.
	L251,L252 AF Choke coil (1μH)	ATH-133

RESISTORS

NOTE:When ordering resistors,convert the resistance value into code form,and then rewrite the part no.as before.

Mark	Symbol & Description	Part No.
★	VR703,VR704 Semi-fixed (100k)	VRTM6H104
★	VR601－VR604 Semi-fixed (20k)	VRTM6H203
★	VR701,VR702 Semi-fixed (20k)	VRTM6V203
	R775,C776,C799	RD1/2PM□□□J
	R621,R731,R732	RD1/4PM221J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	9P socket	AKP-046

CONTROL Assembly (AWZ1323)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC801	LC6520C-3311
★★	Q803,Q804	2SA1515
★★	Q801,Q802,Q809－Q812	2SA933S (2SA1115)
★★	Q814,Q815	2SC1740S (2SC2603)
★★	Q805－Q808,Q813	2SC3377
★	D829	RD5.1ESB
★	D828	RD6.8ESB
★	D817	S5566
★	D801－D813,D815,D818－D821	1SS131

CAPACITORS

Mark	Symbol & Description	Part No.
	C801,C802	CCCSL151J50
	C808	CEAS010M50
	C804,C806	CEAS102M16
	C805	CEAS221M10
	C807	CEAS221M16
	C803	CKCYF102Z50
	C809	CKCYX104M25

RESISTORS

NOTE:When ordering resistors,convert the resistance value into code form,and then rewrite the part no.as before.

Mark	Symbol & Description	Part No.
★	VR802,VR804 Semi-fixed (10k)	VRTM6H103
★	VR801,VR803 Semi-fixed (20k)	VRTM6H203
	R871	RD1/4PM271J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
★	X801 Ceramic oscillator (800kHz)	ASS-039

Mechanism unit (I) SW Assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D826,D827	AEL1035

SWITCHES

Mark	Symbol & Description	Part No.
★★	S811－S815 Tact switch	ASG-711

RESISTORS

Mark	Symbol & Description	Part No.
	R875,R876	RD1/4PM122J

Mechanism unit (II) SW Assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D824,D825	AEL1035

SWITCHES

Mark	Symbol & Description	Part No.
★★	S806－S810 Tact switch	ASG-711

RESISTORS

Mark	Symbol & Description	Part No.
	R873,R874	RD1/4PM122J

SW Assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D823	AEL1034
★	D822	1SS131

SWITCHES

Mark	Symbol & Description	Part No.
★★	S801－S805 Tact switch	ASG-711
★★	S817 Slide switch	ASH1011
★★	S816 Slide switch	ASH1014

RESISTORS

Mark	Symbol & Description	Part No.
	R872	RD1/4PM102J

LOGIC Assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC998	TC4011BP
★★	IC999	TC4069UBP
★	D999	1SS131

CAPACITORS

Mark	Symbol & Description	Part No.
	C999	CKDYF473Z50

RESISTORS

NOTE:When ordering resistors,convert the resistance value into code form,and then rewrite the part no.as befor

Mark	Symbol & Description	Part No.
	All resistors	RD1/8PM□□□J

7. ADJUSTMENTS

Tape speed adjustment

1. Connect the frequency counter to the TP1 terminal (Dolby TP: R-ch) on the complex assembly.
2. Turn the tape switch on.
3. Mount the test tape STD-301 onto deck I.
4. Put the deck I into play mode and short-circuit between terminals TP801 and TP802 on the tape assembly. (STD-301 is play backed in double speed.)
5. Adjust with VR802 so that the playback signal frequency of deck I becomes 6020Hz ± 10Hz.
6. Release the short-circuit between terminals TP801 and TP802.
7. Put the deck I into play mode and adjust with VR801 so that the playback signal frequency becomes 3010Hz ± 5Hz.
   Note: Be sure not to turn VR802 while performing the normal speed adjustment.
8. At this point, be sure to confirm that the wow and flutter are within 0.25% both in the normal speeds.
9. Mount the test tape STD-301 onto deck II.
10. Put the deck II into play mode and short-circuit between terminals TP801 and TP802 on the tape assembly. (STD-301 is play backed in double speed.)
11. Adjust with VR804 so that the playback signal frequency of deck II becomes 6020Hz ±10Hz.
12. Release the short-circuit between terminals TP801 and TP802.
13. Put the deck II into play mode and adjust with VR803 so that the play back signal frequency of deck II becomes 3010Hz ±5Hz.
    (Note: Be sure not to turn VR804 while performing the normal speed adjustment.)
14. At this point, be sure to confirm that the wow and flutter are within 0.25% in the normal speeds.

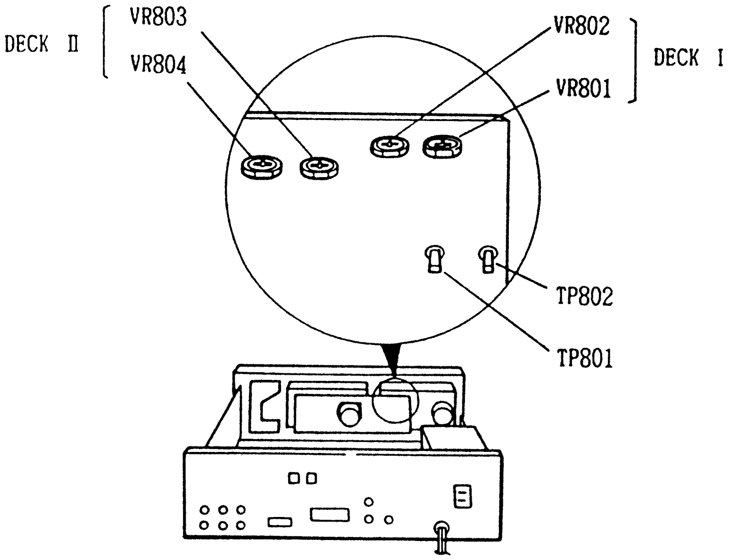


Fig. 7-1 Adjustment Point

Headphone Assembly

SWITCH

Mark	Symbol & Description	Part No.
★★	S591 Tact switch (POWER)	ASG-712

RESISTORS

Mark	Symbol & Description	Part No.
	All resistors	RD1/2PM681J

OTHERS

Mark	Symbol & Description	Part No.
	Mini jack (PHONES)	AKN1004

SW Assembly

SWITCHES

Mark	Symbol & Description	Part No.
★★	S595–S599 Tact switch	ASG-711

REGULATOR Assembly

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
★★	IC561	μPC7812H

CAPACITOR

Mark	Symbol & Description	Part No.
	C591	CEAS100M50

CONNECT Assembly

The electrical parts of this assembly are not supplied.

TAPE Assembly (AWZ1321)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC603	BA335PT
★★	IC601	BA3416BL
★★	IC602	HA12086NT
★★	IC702	M5218LF
★★	IC701	M74LS05P
★★	IC604	TC4066BP
★★	Q722,Q723	2SA1515
★★	Q721,Q730,Q733	2SA933S (2SA1115)
★★	Q601–Q613,Q616–Q620, Q701–Q706,Q715–Q718,Q728, Q729,Q731,Q732,Q734	2SC1740S (2SC2603)
★★	Q724,Q725	2SC2603
★★	Q707,Q708	2SC2878
★★	Q726,Q727	2SK373
★	D705	RD5.1ESB
★	D712	S5566
★	D601–D606,D701–D704, D708–D711,D713–D716	1SS131
★	D706,D707	1S2471

TRASFORMER, COILS AND FILTERS

Mark	Symbol & Description	Part No.
	L705,L706 Trap coil	ATM-037
	L603,L604 Trap coil	ATM1001
	L601,L602 Axial inductor	LAU221K
	L707 Inductor	LTA102J
	L703,L704 Inductor	LTA392J
	F701,F702 Dolby filter	ATF-210
	T701	ATX-043

CAPACITORS

Mark	Symbol & Description	Part No.
	C768 (1500p)	ACE-133
	C743,C744	CCCSL100D50
	C611–C614,C713,C714	CCCSL101J50
	C741,C742	CCCSL101K500
	C763	CCCSL221J50
	C601,C602	CCCSL271J50
	C762	CEASR47M50
	C642,C643	CEASR68M50
	C647	CEASOR1M50
	C605,C606,C609,C610,C624, C625,C705,C708,C711,C712, C748	CEAS010M50
	C636,C637,C701–C704,C707	CEAS100M50
	C709,C710	CEASR22M50
	C618,C644,C645,C737,C738	CEAS2R2M50
	C617,C630,C631,C653,C654	CEAS220M16
	C607,C608,C633	CEAS221M10
	C623,C632	CEAS221M16
	C649	CEAS3R3M50
	C721,C722	CEAS330M16
	C619,C620,C628,C629,C634, C635,C769	CEAS4R7M50
	C650,C706,C715,C716,C747, C761	CEAS470M16
	C651,C652,C770	CKCYB102K50
	C603,C604	CKCYB471K50
	C739,C740,C745,C746,C780	CKCYB681K50
	C646	CKCYF473Z50
	C638,C639,C765,C766	CQMA103J50
	C767	CQMA123K250
	C640,C641,C729,,C730,C764	CQMA153J50
	C717,C718	CQMA182J50
	C626,C627	CQMA183J50
	C731,C732	CQMA223J50
	C621,C622	CQMA273J50
	C615,C616	CQMA333J50
	C735,C736	CQMA472J50
	C733,C734	CQMA393J50
	C648	CQMA473K50
	C727,C728	CQMA562J50
	C771,C772	CQMA681J50
	C719,C720	CQMA683J50

CAPACITORS

Mark	Symbol & Description	Part No.
⚠	C579 (0.01µF/AC400V)	ACG1002
⚠	C581 (0.01µF/AC150V)	ACG1005
	C561,C562 (3300µF/42V)	ACH1033
	C251,C252	CCCSL330J50
	C361,C362,C365,C366	CCDSL101J50
	C487	CCDSL221J50
	C515	CEANP100M50
	C513	CEANP220M50
	C507,C508	CEANP330M25
	C514	CEANP470M50
	C426	CEASR47M50
	C254,C401,C402,C441,C442, C447,C448	CEAS010M50
	C424,C443,C444,C516,C517, C551,C566,C574,C576,C583	CEAS100M50
	C541	CEAS101M10
	C575,C577	CEAS101M16
	C363,C364,C503,C504	CEAS2R2M50
	C481,C482	CEAS221M10
	C255	CEAS332M10
	C563,C564	CEAS332M35
	C483－C486	CEAS4R7M50
	C371－C374,C423,C425,C511, C512,C568,C569	CEAS470M25
	C531	CEAS471M6
	C518,C519	CEYA470M16
	C421	CKCYB102K50
	C253,C367,C368	CKCYB152K50
	C341	CKCYB332K50
	C422	CKCYB392K50
	C369,C370	CKCYB562K50
	C582	CKDYF103Z50
	C256,C375,C427	CKCYF473Z50
	C552,C553	CKCYX104M25
	C376	CKDYF473Z50
	C501,C502	CQMA471K50
	C509,C510	CQMA473K50
	C505,C506	[illegible]SA101J50

RESISTORS

NOTE:When ordering resistors,convert the resistance value into code form,and then rewrite the part no.as before.

Mark	Symbol & Description	Part No.
★	VR431 Variable resistor (30kΩ)	ACS1006
⚠	R571,R572,R590	RD1/2PMFL6R8J
	R541－R544	RD1/2PM471J
⚠	R511,R512,R517,R518, R521－R524	RD1/4PMFL□□□J
	R375,R376,R428,R481,R482, R513－R516,R519	RD1/4PM□□□J
⚠	R520	RFA1/4PL101J
⚠	R539	RS1LMF681J
⚠	R575－R577	RS2LMF181J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	6P Terminal	AKB-095
	4P Terminal (SPEAKER)	AKE-109
	Mini jack	AKN-034
	Mini jack	AKN-207
	Phone jack (MIC)	AKN1003
★	X251 Ceramic oscillator	ASS-030

G. E Assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC201,IC202	BA3812L
★	D231,D237－D241	AEL1002
★	D232－D236	AEL1003
★	D254－D257	RD10ESB

SWITCH

Mark	Symbol & Description	Part No.
★★	S201 Slide switch (TIMER)	ASH1011

CAPACITORS

Mark	Symbol & Description	Part No.
	C230,C231	CCDSL101J50
	C213,C214	CEJAR15M50
	C215,C216	CEJAR68M50
	C211,C212	CEJA101M10
	C201－C204	CEJA4R7M50
	C229	CEJA470M16
	C209,C210	CKCYB331K50
	C221,C222	CKCYB391K50
	C225,C226	CQMA153J50
	C219,C220	CQMA182J50
	C205,C206	CQMA183J50
	C217,C218	CQMA392J50
	C207,C208	CQMA393J50
	C227,C228	CQMA682J50
	C223,C224	CQMA683J50

RESISTORS

NOTE:When ordering resistors,convert the resistance valu into code form,and then rewrite the part no.as befo

Mark	Symbol & Description	Part No.
★	VR201－VR205 Variable resistor (30kΩ)	ACU1011
	R205	RD1/4PM221J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	Remote control sensor	AXX1005

Electrical system adjustment

Prior to the electrical system adjustment, be sure to confirm the following itesm.

1. The mechanical adjustment should be completed.
2. Perform cleaning of the head and the demagnetization of head with the head eraser.
3. The level during measurement is determined at 0dBv = 1V.
4. The specified tape should be used for adjustment.
   Since the test tape has A side and B side, use the A side with label.
   STD-331B: For playback system adjustment
   STD-608A: Normal blank tape
   STD-620: CrO_2 blank tape
   STD-610: Metal blank tape
5. Prepare the following measuring instruments.
   AC millivoltmeter, low frequency oscillatore, attenuator, and oscilloscope.
6. For the adjustment, perform both L and R channels unless otherwise specified.
7. Turn the Dolby NR switch to off unless otherwise specified.
8. Prior to the adjustment, be sure to perform aging of the set for several minutes. Especially prior to entering the adjustment of the recording and playback frequency characteristics, aging should be performed in REC/PLAY mode for 3 to 5 minutes.
9. The adjustment should be performed in accordance with the adjustment order. If the order is not kept, it may cause the failure of the complete adjustment which induces the inferior function of the unit.

Deck I

1. Head azimuth adjustment
2. Playback level adjustmint

Deck II

1. Head azimuth adjustment
2. Playback level adjustmint
3. Adjustment of recording and playback frequency characteristics
4. Adjustment of recording level

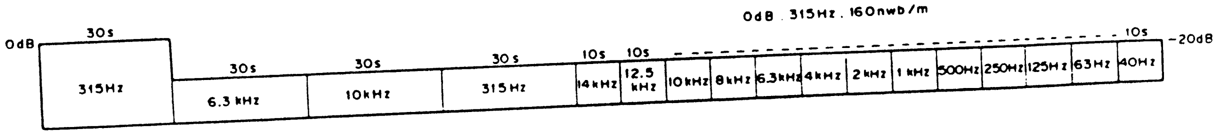


Fig. 7-2 Test tape STD-331B

Adjustment of Deck I

•This deck is provided with an auto-tape-selector mechanism.

1. Head azimuth adjustment

• (Note) Do not select FWD and REV with the screwdriver being kept inserted.

Procedure	Tape selector (AUTO)	Mode	Input signal/test tape	Adjusting point	Measuring point	Adjustment value	Remark
1	NORM	PLAY	Play back 10kHz/–20dB on test tape STD-331B	Head azimuth adjusting screw (Fig.7-4)	TP Lch TP Rch	Maximum playback signal level	After completion, lock the screw

2. Playback level adjustment

• Perform this adjustment precisely since this adjustment is Dolby level setting during playback.

Procedure	Tape selector (AUTO)	Mode	Input signal/test tape	Adjusting point	Measuring point	Adjustment value	Remark
1	NORM	PLAY	Play back 315Hz/0dB on test tape STD-331B	VR603 (L) VR604 (R)	TP Lch TP Rch	–13.5dBv	

Adjustment of Deck II

•This deck is provided with an auto-tape-selector mechanism.

1. Head azimuth adjustment

• (Note) Do not select FWD and REV with the screwdriver being kept inserted.

Procedure	Tape selector (AUTO)	Mode	Input signal/test tape	Adjusting point	Measuring point	Adjustment value	Remark
1	NORM	PLAY	Play back 315Hz/0dB on test tape STD-331B	Head azimuth adjusting screw (Fig.7-4)	TP Lch TP Rch	Maximum playback signal level	After completion, lock the screw.

2. Playback level adjustment

• Perform this adjustment precisely since this adjustment is Dolby level setting during playback.

Procedure	Tape selector (AUTO)	Mode	Input signal/test tape	Adjusting point	Measuring point	Adjustment value	Remark
1	NORM	PLAY	Play back 315Hz/0dB on test tape STD-331B	VR601 (L) VR602 (R)	TP Lch TP Rch	–13.5 dBv	

3. Adjustment of recording and playback frequency characteristics

• This adjustment is performed in order to adjust the recording bias. Therefore, caution should be exercised not to worsen the distortion ratio due to under bias.

Procedure	Tape selector (AUTO)	Mode	Input signal/test tape	Adjusting point	Measuring point	Adjustment value	Remark
1	NORM	REC	STD-608A and put into REC mode.	Bias oscillator frequency T701	Between Ⓐ and Ⓑ in Fig.7-3	Confirm that the oscillation frequency 105 kHz ±1 kHz.	When it is not within the standard, put it into the standard by adjusting T701.
2	NORM	REC	Apply the signal of 315Hz to the CD terminal and turn the CD switch on.	Input signal level	TP Lch TP Rch	–33.5 dBv	
3	NORM	PEC/PLAY	Record and play back 315Hz and 10kHz on test tape STD-608	VR703 (L) VR704 (R)	TP Lch TP Rch	Repeat recording and playback, and compensate so that the playback level of 10kHz against 315Hz becomes 0±0.5dB.	

• Select the test tape, tape selector, and Dolby NR switch and satisfy the frequency characteristic zone as shown in Figs. 7-5 and 7-8.

4. Recording level adjustment

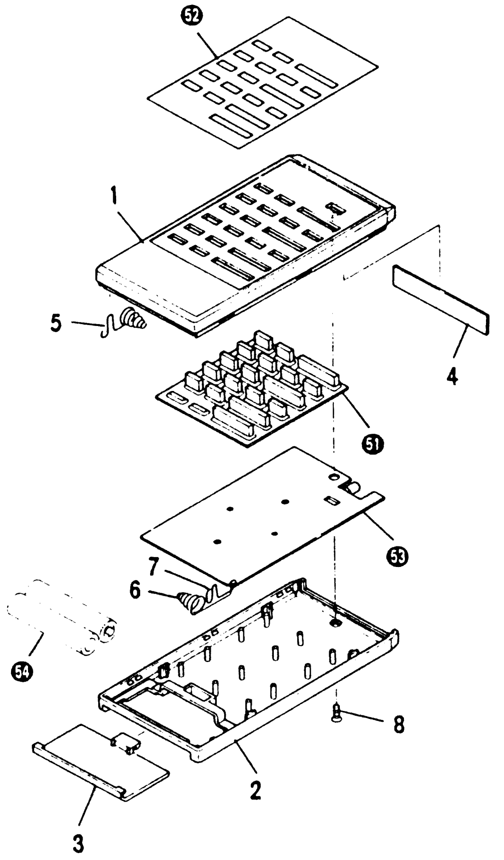
• Set the graphic equalizer and balance volume to the center and the mike mixing volume to the source side.

Procedure	Tape selector (AUTO)	Mode	Input signal/test tape	Adjusting point	Measuring point	Adjustment value	Remark
1	NORM	REC	Apply the signal of 315Hz to the CD terminal and turn the CD switch on.	Input signal level	TP Lch TP Rch	–13.5dBV	
2	NORM	REC/PLAY	Record and play back 315Hz to the test tape STD-608A.	VR701 (L) VR702 (R)	TP Lch TP Rch	Repeat recording and playback, and compensate so that the playback level of 315Hz becomes –13.5 dBv	
3	CrO2	REC/PLAY	Record and play back 315Hz to the test tape STD-620.		TP Lch TP Rch	Confirm that the playback level of 315Hz becomes -13.5dBv (±2.0dB)	
4	METAL	REC/PLAY	Record and play back 315Hz to the test tape STD-610.		TP Lch TP Rch	Confirm that the playback level of 315 Hz becomes -13.5dBv (±2.0dB)	

Note: If it is not set in REC/PLAY mode, there will be no signal to the TP terminal.
(In REC PAUSE mode, there is no signal to TP.)

9. REMOTE CONTROL
9.1 EXPLODED VIEW AND PARTS LIST

NOTES:
- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

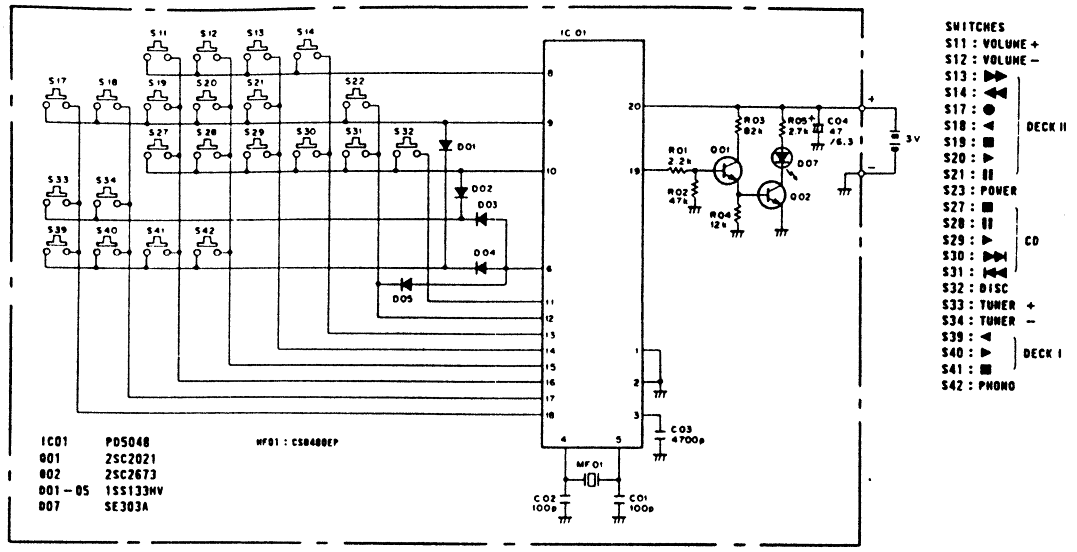


Parts List

Mark	No.	Part no.	Description
	1	AZA1053	Case (A)
	2	AZA1054	Case (B)
	3	AZA1055	Case (C)
	4	AZA1056	Filter
	5	AZK1042	Terminal (A)
	6	AZK1043	Terminal (B)
	7	AZK1044	Terminal (C)
	8	AZB1057	Screw
	51		Rubber switch
	52		Name plate
	53		P.C. Board
	54		Battery

9.2 SCHEMATIC DIAGRAM AND P.C.BOARD PATTERN

SCHEMATIC DIAGRAM


S11
S12
S13
S14
S17
S18
S19
S20
S21
S22
S27
S28
S29
S30
S31
S32
S33
S34
S39
S40
S41
S42
IC01
D01
D02
D03
D04
D05
R01 2.2k
R02 47k
R03 82k
R04 12k
R05 2.7k
C04 47 /6.3
Q01
Q02
D07
3V
C03 4700p
MF01
C02 100p
C01 100p
IC01 PD5048
Q01 2SC2021
Q02 2SC2673
D01 – 05 1SS133HV
D07 SE303A
MF01 : CSB480EP
SWITCHES
S11 : VOLUME +
S12 : VOLUME –
S13 : ▶▶
S14 : ◀◀
S17 : ●
S18 : ◀
S19 : ■
S20 : ▶
S21 : ❚❚
DECK II
S23 : POWER
S27 : ■
S28 : ❚❚
S29 : ▶
S30 : ▶▶❚
S31 : ❚◀◀
CD
S32 : DISC
S33 : TUNER +
S34 : TUNER –
S39 : ◀
S40 : ▶
S41 : ■
DECK I
S42 : PHONO

1. RESISTORS.
Indicated in Ω, ¼W, ⅙W, ±5% tolerance unless otherwise noted k; kΩ, M, MΩ, (F); ±1%, (G), ±2%, (K), ±10%, (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT.
: DC voltage (V) at no input signal
Value in (   ) is DC voltage at rated power.

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.

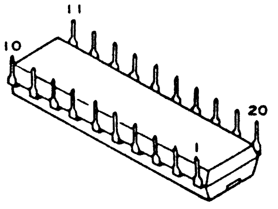
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

✗ marked capacitors and resistors have parts numbers.

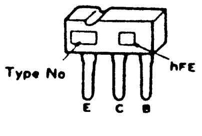
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

External Appearance of Transistors and IC

PD5048



2SC2021


Type No
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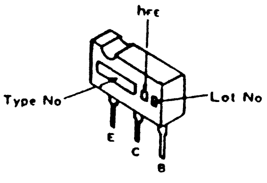
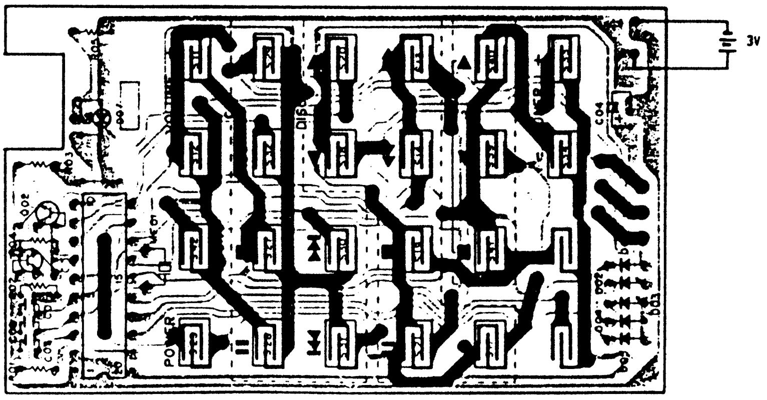
E
C
B

2SC2673


hFE
Type No
Lot No
E
C
B

P.C.BOARD PATTERN


3V
R05
R03
Q02
C04
DISC
POWER
D03

9.3 ELECTRICAL PARTS LIST

NOTES:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

  560Ω 56×10^1 561..........................RD1/4PS$\boxed{5}\boxed{6}\boxed{1}$J
  47kΩ 47×10^3 473..........................RD1/4PS$\boxed{4}\boxed{7}\boxed{3}$J
  0.5Ω 0R5..RN2H$\boxed{0}\boxed{R}\boxed{5}$K
  1Ω 010..RS1P$\boxed{0}\boxed{1}\boxed{0}$K

  Ex. 2 *When there are 3 effective digits (such as in high precision metal film resistors).*

  5.62kΩ 562×10^1 5621........................RN1/4SR$\boxed{5}\boxed{6}\boxed{2}\boxed{1}$F
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*

  ★★ GENERALLY MOVES FASTER THAN ★

  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts List

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC01	PD5048
★★	Q01	2SC2021
★★	Q02	2SC2673
★	D01－D05	1SS133HV
★	D07	SE303A

FILTER

Mark	Symbol & Description	Part No.
	MF01	CSB480EP

CAPACITORS

Mark	Symbol & Description	Part No.
	C01,C02	CCCSL101J50
	C03	CKCYB472K50
	C04	CEAS470M6R3

RESISTORS

NOTE:When ordering resistors,convert the resistance value
into code form,and then rewrite the part no.as before.

Mark	Symbol & Description	Part No.
	R01－R05	RD1/8PM□□□J